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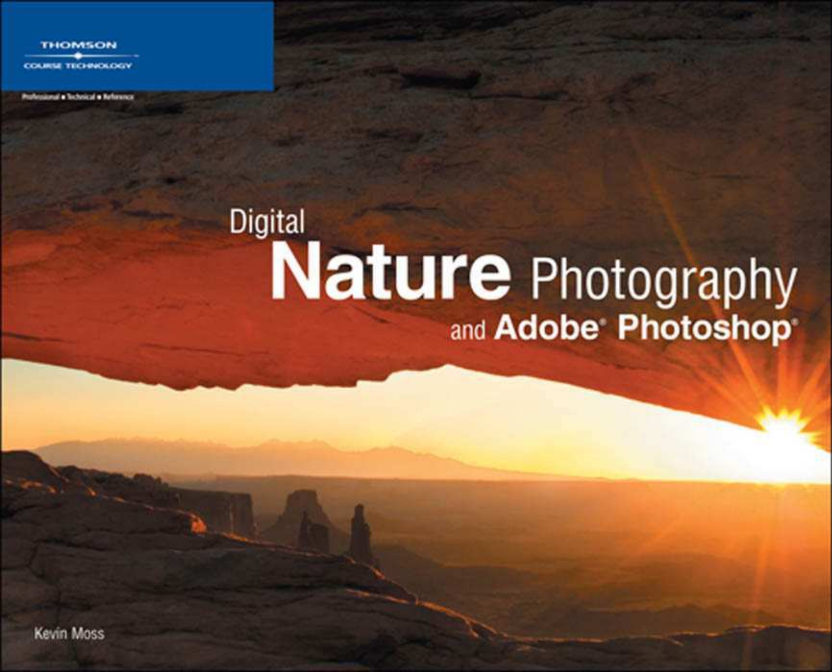

Digital Nature Photography and Adobe® Photoshop®

Kevin Moss

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Kevin Moss

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For the love of my life, Amy, and our children, Amanda, Emily, and David

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About the Author

Kevin Moss is a longtime photographer and author of digital photography and Photoshop books. With a background in computer and Web systems, Kevin has never left his photographic roots and has combined his years of computer and photography skills. He has actively pursued his personal interests in fine-art nature photography and has most recently started pursuing other photography disciplines and new technologies.

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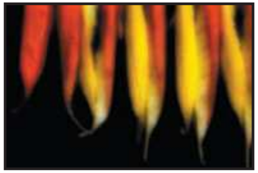

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Introduction

Digital nature photographers are a different breed from other types of photographers. They are equal parts adventurer, traveler, nature and wildlife observer, and digital photographer. Facing challenges other photographers don't have, digital nature photographers have to take a lot into consideration when practicing their craft. *Digital Nature Photography and Adobe Photoshop* is written expressly for digital nature photographers, addressing their particular needs.

Digital Nature Photography and Adobe Photoshop combines information on editing and processing digital nature and landscape photos using Adobe Photoshop, with an advanced guide to composing and shooting as well as choosing the proper equipment. The first half of the book provides detailed information on the essential equipment, gear, and techniques needed to photograph nature and landscapes, while the second half lays out how to develop workflows to perform color and tonal corrections to images, as well as how to apply some advanced editing techniques to your photographs. This comprehensive guide also details creating special effects using Photoshop filters and converting color images into stunning black-and-white photographs. All of the essential skills are taught using step-by-step tutorials and enhanced by stunning full-color examples of digital nature photography.

1

Using Digital Cameras for Nature Photography

I gave up using my film SLR when I purchased a Sony DSC-F707 5-megapixel digital camera some years back, and I haven't shot a roll of film since. As a computer geek and nature photographer, the minute I discovered that the quality of digital cameras was getting close to film, I jumped on the bandwagon. I had been scanning my 35mm slides into digital files for years, processing them in Photoshop, and then printing them on my array of photo-quality printers. For me, switching to full-time digital was a no-brainer.

Besides image quality, one of the other deciding factors in jumping to digital was the cost. When shooting film, I'd purchase 40 rolls of Velvia at a time for my photo trips, spend a few days or a week shooting them, and then send them out for processing. I wouldn't see my results until days after I returned from shooting one of my favorite landscape regions. With my digital camera, I can see my results *instantly*.

Photos taken with my first digital camera remain as staples in my nature portfolio. This landscape was taken with a Sony DSC-F707.

Since I jumped into the digital camera game, both consumer- and professional-model digital cameras have advanced technically to the point where shooting film doesn't even make sense anymore. Unlike its film counterpart, digital camera technology is advancing rapidly and will continue to advance at a fever pace until the end, which isn't in sight. Currently, the top digital camera manufacturers are waging megapixel wars, and it's the photographer who's winning. What we get every six months to a year are a flock of new models that provide better features, sharper sensors, and more megapixels. It doesn't matter whether you're a Nikon, Canon, Olympus, Minolta, or Pentax shooter (forgive me if I left your manufacturer out), there is always a better model around the bend.

Image courtesy of Nikon USA.

At the time of this writing, state-of-the-art digital SLRs are boasting 12.4 to 16.7 megapixels and their price tags are aimed at professionals. Affordably priced 8-megapixel digital SLRs are now the norm for Canon shooters. As a matter of fact, digital SLRs from Canon, Nikon, Pentax, Olympus, and Minolta cost the same as that 5-megapixel compact digital camera I purchased just a few years ago. Does that mean you need to upgrade your digital camera equipment every six months to a year? Absolutely not; if your current digital camera is giving you great results, what's the rush? When you do get that itch to upgrade, you can be sure there will be a lot of new options out there for you to choose from.

Advantages of Digital Cameras over Film in Nature Photography

If you're still shooting film and you haven't yet switched to digital, you're not alone. On a recent trip shooting waterfalls during peak fall color in a popular region of northern Michigan, I ran into a lot of photographers. Yes, most were shooting digital—almost all of the digital photographers I ran into were using digital SLRs—but I was a little surprised to see how many were still using their film-based SLRs and large-format cameras. It makes sense; many nature photographers have years of investment in film equipment, all of it still serviceable. In talking to these nature photographers (we are always striking up conversations), I find that although they are still shooting film, almost all are scanning their images using high-end film scanners, and almost all are using Photoshop. Additionally, *all* of the film shooters I met were planning to switch to digital in the near future.

Like many of us nature photographers, I switched to digital simply because the advantages outweighed the disadvantages. Advantages for using digital cameras for nature photography include:

- **Getting immediate feedback.** One of the biggest advantages to shooting digital is the fact that you can get immediate feedback after a shot. You can view the image on your LCD, and on many models you can view a histogram to help you judge exposure. The histogram comes in especially handy when you are shooting in difficult lighting conditions, such as when your image includes a combination of sunlit and shadow areas. After composing and taking a photo, you can review your composition on the LCD and recompose the next shot until you get it right. Additionally, you can also see whether the image is properly focused; if it isn't, you can always delete the image and take another.
- **Changing ISO on the fly.** With film cameras, you have to change your roll of film if you want to shoot a scene at a different ISO setting. That can be quite inconvenient if you have 20 shots left on a 36-exposure roll. With digital, all you have to do is change the ISO setting! You can shoot as many shots with different ISO settings as you want. Digital gives you a time- and money-saving advantage when it comes to switching ISO, which, as nature photographers, we do often in the field.

The ability to receive immediate feedback helps nature photographers make changes to camera settings when shooting in difficult lighting situations.

- **Adjusting white balance.** With film cameras, if you wanted to switch from shooting in different lighting conditions, such as shooting flowers in natural lighting and then going into the studio to shoot with tungsten lighting, you'd have to switch film rolls. With digital, you can use the auto white-balance setting or manually set your white balance to the lighting conditions in which you're shooting.
- **Composing shots using the LCD**. I'm going to hear some argument on this, but on compact digital cameras, you have the ability to compose a scene using the LCD screen instead of the viewfinder. Of course, this is only for compact digital cameras; on digital SLRs you still have to compose your shot using the viewfinder. On another note, nature photographers shoot outdoors, where in most conditions it may be difficult to actually see the scene on the LCD due to sunlight or bright conditions.
- **Saving on cost.** If you shoot thousands of nature photos a year, like I do, you're going to save a ton of money shooting digital. No film or processing costs! Suppose you shoot 100 rolls of 36-exposure film at a cost of $15 (with processing). Do the math—that's a $1,500 savings right there! It doesn't take much thought to figure out that you can finance your purchase of some pretty good digital camera equipment in a short period of time, just by saving in film and processing costs.
- **Saving time.** Let's face it—photographers like instant gratification. We shoot all day long in the field, and the first thing we do when we get home is load up our memory cards to our computer and view the day's catch. With film, you have to either develop the film yourself or send it out to a lab for processing, which could take a few hours to a few days. By shooting digital, you can preview your photos immediately on your digital camera's LCD or load them onto your computer and view your images with Photoshop right away. If you're fast, you can get some images printed on your inkjet within minutes of loading your images onto your computer.

The Right Digital Camera for the Job

With all the digital camera choices available on the market now, which one is best for the nature photographer? To be honest, there really isn't a correct answer. Just like film cameras, digital cameras come in all sorts of flavors, and your personal tastes will dictate a lot of the choices you'll make. There are professionals out there who will only work with high-end professional digital cameras, such as the Canon EOS 1Ds Mark II with its speed of four frames per second (4 fps) and its full-frame 16.7-megapixel sensor, while others are happy with compact digital "point and shoot" cameras.

Other nature photographers, like me, use a number of different digital cameras. I carry into the field my digital SLR and accompanying lenses, plus a compact digital camera. Actually, I like the idea of carrying a compact digital camera everywhere I go. Additionally, a small "pocketable" compact, such as the Nikon Coolpix 7900 digital camera, gives you the ability to shoot some great macro shots, which is something I do often while I'm out shooting other nature scenes. I carry this camera wherever I go, shooting nature or just as an everyday walking-around camera.

Some high-end users and professional nature photographers will only shoot with professional equipment, such as the Canon EOS 1Ds Mark II.

Carrying a small, compact digital camera, such as the Nikon Coolpix 7900, has its advantages, like shooting great macro images. These high-quality compact digital cameras boast great lenses and adequate megapixel sensors, and they're a great everyday carry-around camera.

Before graduating to digital SLRs, I used prosumer (professional-consumer grade) digital cameras. A prosumer digital camera contains excellent wide-angle-to-zoom lenses and equally excellent image sensors. These prosumer models just keep getting better, with many models now including vibration reduction, which allows you to take sharp photos by eliminating vibration when you're taking the picture. Examples of these "all-in-one" cameras are the Nikon Coolpix 8800, the Canon PowerShot Pro1, and the Panasonic Lumix DMC-FZ30. Recent models of this class of cameras come equipped with professional-quality lenses, vibration reduction (on some models), and 8-megapixel sensors or larger.

The fastest growing segment of digital cameras is the now-affordable digital SLR. In the past few years, Canon, Nikon, Minolta, Pentax, Olympus, and Sigma have all come out with their versions of the digital SLR. Only a few years ago, purchasing a digital SLR wasn't within the reach of most hobbyists or advanced amateurs. The digital SLRs on the market were only aimed at the professional, with price tags matching those of gas-guzzling SUVs. Now for the same price as the top prosumer models, you can obtain a digital SLR *with* a lens.

Prosumer digital cameras offer all-in-one packages that include high-megapixel sensors, vibration reduction, and wide-angle telephoto lenses. The Panasonic Lumix DMC-FZ30 offers an 8-megapixel sensor with an excellent Leica 35mm to 420mm lens with MEGA Optical Image Stabilizer, a great combo for nature and wildlife photographers.

The Nikon D50 with a kit lens costs about the same as many compact or prosumer digital cameras. Digital SLRs are becoming more and more affordable to nature photographers who want to upgrade.

Digital SLRs appeal to film shooters who have already invested in lenses for their particular models. Purchasing a digital SLR from the same manufacturer as your film system makes sense because you can still use the lenses in which you have invested. When choosing a digital SLR, keep in mind that you are also locking yourself into a "system," because each manufacturer has proprietary lenses and accessories that only work on their brand of camera.

Besides impressing friends and other photographers, advantages to a digital SLR include:

- **Interchangeability of lenses and accessories.** When you buy into a digital SLR, you're buying into a system. If you already own a Nikon F100 film SLR, the lenses and accessories you already have will probably work on your new Nikon digital SLR. In turn, when you purchase a new digital SLR, any lenses or accessories you purchase along with it will probably be compatible with additional digital SLRs you might purchase from the same manufacturer in the future. Many professional nature photographers who used Canon or Nikon film SLRs have remained loyal to the same manufacturers for their digital equipment, mainly because of the thousands of dollars worth of lenses they had already invested in that manufacturer's system.

  Additionally, for nature photographers, nothing can beat the effects you can get from interchangeable lenses. The quality and range of lenses manufactured for SLRs often can't be duplicated in a compact or prosumer digital camera. Yes, you can get consistent excellent results with these digital cameras, but the advantage and quality of choices in a digital SLR lens lineup can be noticeable in the images a knowledgeable photographer can produce with good gear.
- **Better image quality.** Digital SLRs often come equipped with advanced image sensors, often physically larger than those found in compact digital cameras. The result of having larger image sensors is that the manufacturer isn't "cramming" pixels into a smaller space like with their compact digital counterparts. For instance, a six-megapixel sensor on a digital SLR is physically larger than a six-megapixel sensor on a compact digital camera. The result of larger sensors is sharper images with less image noise and "blooming," an effect of purple fringing in detail areas of images.
- **Lens crop factor.** On many digital SLRs, you have an effect of lens cropping. Lens cropping occurs when you have a lens on a film SLR that's rated at 200mm, but when you use it on a digital SLR, it becomes a 300mm lens! The crop factor occurs because the image sensor is smaller than a 35mm frame, thus the image is focused into a smaller area, resulting in better reach of your telephoto lenses. The downside is that you lose crop factor on the wide-angle end of the lens range. A 20mm wide-angle lens on a film camera would have the effect of a 30mm lens on a digital SLR with a 1.5 crop factor. Some digital SLRs—high-end models such as the Canon EOS 1Ds Mark II—have full-frame image sensors with no crop factor at all. The image sensor is so large that it's the same size as its 35mm film frame!

Choosing the Right Accessories

Choosing the right accessories for your digital camera is almost as important as choosing the digital camera itself. For nature photographers, there are a number of accessories you should have in your camera bag when going out in the field, in addition to a good supply of bubble gum and aspirin. Nature photographers have different gadget needs than, let's say, a portrait photographer. Nature photographers need a greater zoom range in their lenses, possibly accessory lenses for compacts or prosumer models, tripods, memory cards, batteries, lens cleaning blowers and brushes, and other gadgets most people wouldn't even think of.

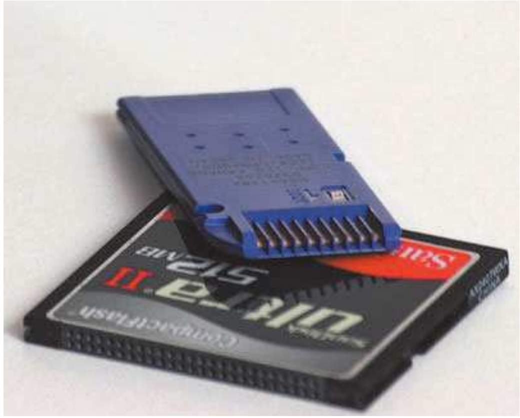
What's in your bag? Nature photographers need to carry all their accessories with them out in the field—everything from lenses to batteries.

Important accessories for the nature photographer include:

- **Memory cards.** With any digital camera, you need memory cards on which to store your photos. Memory cards replace film, in a way. Instead of your lens and shutter capturing an image on film, it records on your image sensor, which in turn records the digital image information on a memory card. Memory cards come in different flavors, the most popular being CompactFlash, XD, SD, or Memory Stick. They all work the same; however your digital camera might only accept one type of card. I have a collection of all kinds—CompactFlash cards for my digital SLR, Memory Sticks for my Sony compact digital camera, and SD cards for my Nikon compact digital camera. It's a shame the industry hasn't standardized to one format, because it can be confusing.

  If you know what type of card your digital camera accepts, you need to estimate how many cards you'll need and how much memory capacity each should have. I used to purchase my cards at a size of 512 megabytes. I liked the fact that I could back up each card on a writable CD, and 512 megabytes was a good amount to fill up a CD. However, digital cameras are now boasting 6- to 16-megabyte images, which can fill up a memory card pretty fast. I now use 1 or 2 gigabyte memory cards, which will hold 100 to 200 digital images each, but I now back them up to DVDs, which have a capacity of 4.5 gigabytes.

  I carry with me at least enough memory cards to get me through an entire day of shooting in the field, but I have enough to last me through four or five days of full-time shooting. I often fill up two or three 1-gigabyte cards in a day shooting my landscapes, which translates into hundreds of photos. The way I look at it, memory cards are cheap and reusable, so why not take a lot of photos? I own about 12 cards and I keep them all in my bag. After a day of shooting, I download my cards to my laptop computer (which I travel with), and then I immediately back up those images to a DVD. If I'm out of town, I save the memory cards I've used, downloaded, and backed up just as an extra precaution until I get back to my home office. Only when I'm sure my images are properly downloaded and backed up will I reuse my cards.



Memory cards come in all sorts of sizes and formats. As a rule of thumb, you should buy the largest and fastest one that you can afford.

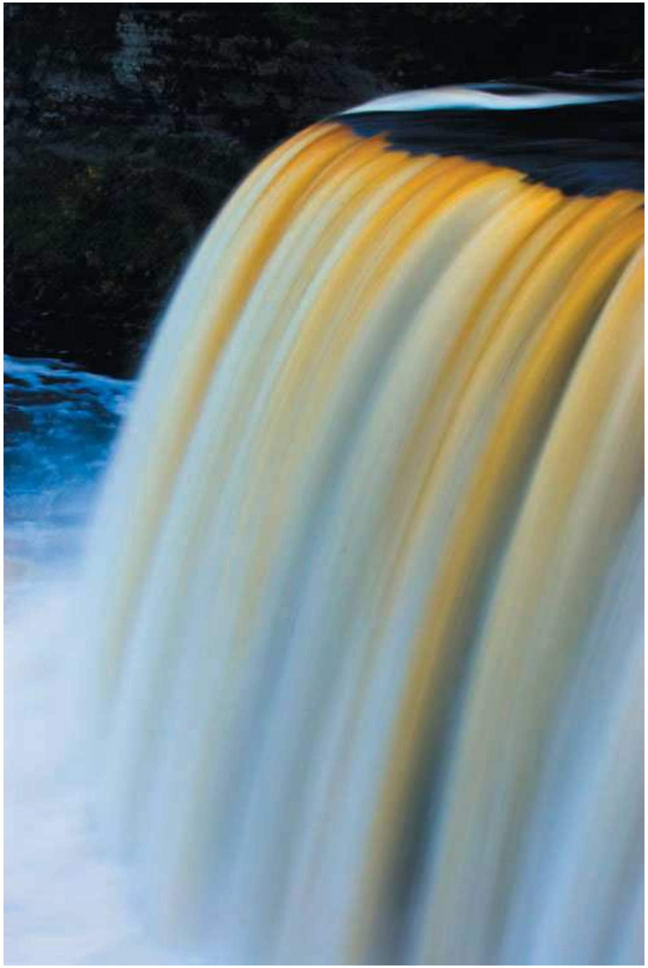
- **Offline storage devices.** If carrying a laptop with you when you take trips is a pain, there are other offline storage devices to which you can download your digital images. You can download images to an Apple iPod, as well as the Epson P-4000 viewer. Both are good alternatives to carrying a laptop on long trips and can provide plenty of offline storage for your viewing needs while traveling on the road.
- **Tripods.** The most important accessory for the nature photographer is a tripod. More often than not, we shoot scenes that require a solid mount for our digital cameras because we often shoot in low-light situations. I'll explain about tripods in more detail in Chapter 3, "Outfitting for the Outdoors."
- **Lenses.** Nature photographers often need lenses that can reach both wide-angle and telephoto extremes. If you're into shooting photos of wildlife, you may need zooms that can reach 400 to 600mm. Shooting grand vistas requires both wide-angle and telephoto ranges. I typically shoot with ranges from 17mm all the way to 450mm.

  If you're shooting with a digital SLR, lenses that cover wide-angle to normal ranges are popular. These lenses will typically cover 17 or 18mm to 50 or 70mm. If you want longer reach, 70 to 200 or 300mm lenses are popular "second" lenses.

  If you're shooting with a prosumer or compact digital camera, chances are you can purchase accessory lenses. Accessory lenses are attachments you can purchase for your built-in lens that can offer you either wide-angle or telephoto capabilities. Check with your digital camera manufacturer for the availability of these add-on lenses.

The Epson P-4000 Multimedia Storage Viewer comes with an 80-gigabyte hard disk, a 3.5-inch LCD display that can show both JPEG and raw images, and slots for both CompactFlash and SD cards.

- **Filters.** For nature photographers, the most popular filters to consider adding to your gadget collection are neutral density and circular polarizing filters. I carry neutral density filters to darken scenes without affecting color; darkening the scenes gives me an extra couple f-stops needed to get a nice blurring effect with waterfalls. Circular polarizers are great additions to darken blue skies and to reduce glare off of rocks and foliage.



Neutral density filters are handy when you want to slow down your shutter speeds to get soft water effects when shooting waterfalls or rapids. Neutral density filters just help darken the image, resulting in slowing your exposure a few f-stops—often enough to get great effects.

- **Batteries.** Nothing can get a nature photographer angrier than exhausting a camera battery and not having a spare. It's a good idea to have at least one or two spare batteries in your camera bag at all times, especially when traveling. Never venture out without having all your digital camera batteries charged. Also consider buying accessory car battery chargers when traveling on the road, and make sure you bring along your regular battery charger to recharge your batteries when you get to your hotel.
- **Flashlights.** I always carry a small pen-sized flashlight in my camera bag. When I'm out in the field, I'm often out shooting in the early morning, before sunrise, or even late, after sunset. Having a small flashlight helps me find other gadgets in my bag when it's dark, and it even helps illuminate controls on my digital camera in the dark.
- **Lens-cleaning items.** When venturing out in the field, make sure to pack lens-cleaning tissue and dust-removal blowers and brushes. If you're out shooting in the elements, you'll often find that dust, dirt, grime, and sand can find their way onto the surfaces of your lenses and filters. I always carry blower brushes, lens-cleaning tissue, and lens-cleaning fluid with me in the field, and I use these often.

2

Computer Gear for Your Digital Darkroom

I belong to the early adopter generation. Let's put it this way; my first computer was an IBM XT with a 10-MB hard disk and 256 K of memory. It ran WordStar (now gone), Lotus 1-2-3 (now gone, I think!), and an assortment of lightweight database products. The most advanced software you could run on that computer was Microsoft's Flight Simulator, but only if you had a Hercules graphics card—monochrome of course! That was in the early 1980s, right around the same time that good music took a long vacation.

I've owned several computers since—yes, I'm one to upgrade every couple years—but I was a computer guy anyway. Either I was selling them to corporate America or buying them for corporate America. My day job was in IT; I purchased, networked, and set up the things by the truckload. Does that make me an expert in computers now? Not since I was a computer jockey years back, but I still know all the configurations and gadgets the nature photographer needs. Now I can let somebody else install enterprise networks and Web applications; I'm going out to take some photos of deer!

Nature photography meets technology. Our tools were cameras, lenses, and film; now they're cameras, lenses, and computers.

Computers and Software for Digital Photographers

The rule of thumb when purchasing computers is to buy the biggest and fastest you can afford. For nature photographers, the rule needs to be customized a bit. I still believe you need a big, honking computer for processing your images in Photoshop, but what about when you're out in the field? I don't lug around my desktop computer when I travel cross-country on a photo safari; I recommend hauling a laptop. Unfortunately, not everyone has the luxury of having both a desktop computer and a laptop, but let's look at the advantages and disadvantages of each.

Desktop Computers for the Nature Photographer

Desktop computers typically contain more memory, disk space, and expandability than their portable counterparts. It's always been that way, and it will continue to be for the foreseeable future. The reason? There's more room for computer manufacturers to include less-expensive components with desktops than with laptops. What that means to you is more bang for your buck; you can typically get a desktop computer for far less money than a similarly equipped laptop.

Desktop computers are still very popular and offer advantages over laptop computers for speed, price, and video quality. ©1994–2003 Hewlett-Packard Company. All rights reserved.

Whether you're using a PC or a Mac, make sure you purchase the highest-end desktop you can afford. Apple offers excellent desktop computers, such as the PowerMac G5, favorites of graphic artists and photographers. Photo courtesy of Apple Computer.

For desktop computers, I recommend the following equipment specifications.

- **Processor.** Graphics and photo editing software, such as Photoshop, requires a lot of horsepower. My suggestion is to get the most powerful processor you can afford. In the PC world, that means a computer equipped with a Pentium 4 or the newer Pentium D, with at least a 3.2-gigahertz clock speed. You can find desktop computers with Celeron processors much cheaper, but they aren't nearly as powerful as the Pentium 4 or D. If you're a Mac user, stick with one of Apple's higher-end desktop models, such as the Power Mac G5.
- **Memory.** The next important part of your computer is internal memory. Internal memory is what your computer uses as a "temporary holding tank" to load operating system (Windows or Mac OS) programs and files. Although Photoshop will run with less than 512 megabytes of memory, make sure your computer has at least 1,024 megabytes of memory.
- **Hard disk.** The second type of memory you need to consider for your computer is your hard disk. Your computer's hard disk is the permanent (or at least for as long as your hard disk stays healthy) file and program storage for your computer. It seems that hard disk drives get bigger and bigger every year. Higher-end models come equipped with 300 gigabytes of storage! Because the nature photographer will often take multiple shots of the same scene, even more with bracketing shots (see Chapter 4, "Shooting Landscapes"), those 1-gig cards downloaded to your computer add up after a while. Go for the biggest hard disk drive your computer can handle. You'll use it; trust me!
- **Graphics card.** The graphics card (also referred to as the *graphics controller*) is the component inside your computer that determines how graphics are displayed on your computer monitor. All computers come with graphics cards; however, some computer models are configured with enhanced graphics cards with extra "onboard" video memory, usually suited to game players. Even if you don't play games on your computer, the extra video memory these enhanced controllers offer will help render your photos a little quicker.
- **Input/output (IO) ports.** Nature photographers pack a few more peripherals than most computer users. Card readers, external hard disk drives, graphics tablets, mice, and direct-connecting digital cameras mean you need some USB and/or FireWire ports. USB and FireWire ports allow you to connect these peripherals to your computer. Typically, I'll have a USB mouse, two external FireWire/USB hard disk drives, and a card reader connected to my computer. That's a minimum of four ports needed on my computer. If I wanted to direct-connect a digital camera or one of those little pocket Flash drives to my computer, I'd have to unplug one of my peripherals. Make sure you get a computer with at least four USB ports and one FireWire port.

Laptops for the Nature Photographer on the Go

I remember my first "portable" computer. It was a two-floppy Compaq Portable with a 9-inch monochrome display, and it weighed about 30 pounds! You carried it around like a suitcase, and if you were carrying it home from work, you'd stretch the arm you were carrying it with. After a while, you'd wind up with one arm longer than the other! If you switched arms once in a while, you'd start looking like an orangutan. (You get the idea…and I do like orangutans!)

We've come a long way since the early 1980s. We now can purchase laptop computers that weigh just a couple of pounds; come with more than 100-gigabyte disk drives, one to two gigabytes of memory, and 17-inch displays; and will play our favorite DVDs while we're on an airplane or camping! Nowadays you can even get a laptop equipped with a TV tuner. Next, I'm waiting for a massaging keyboard (adjustable) to relax my hands after a long day of shooting in the field (quick, to the patent office!).

Laptop computers have overtaken desktop computers in sales, and why not? Many are equipped with large hard disks, plenty of memory, and writable optical drives. ©1994–2005 Hewlett-Packard Company. All rights reserved.

Laptop computers are more important for a nature photographer than for a portrait or still-life shooter. The reason? We often travel to our locations, whether they are quick overnighters or extensive one- or two-week safaris. When traveling overnight, I always pack my laptop. I could get by carrying an offline photo viewer, such as the Epson P-4000, but I like the added insurance of downloading my images nightly and burning a couple of DVDs for backups. The only way I get that insurance is to haul my laptop with me. As a bonus, by traveling with a laptop, I can spend the evenings in my hotel room or camper playing with my images in Photoshop.

My recommendation for laptop computers is the same as for desktop computers—buy the fastest you can afford with lots of memory and hard disk space. Here are my recommendations to outfit your laptop:

- **Processor.** Processors for laptops differ from those for desktop computers. Because laptop computers can run on batteries, computer manufacturers are always looking at ways to be more efficient with power. You can purchase laptops with Pentium 4 processors, but also with Intel Pentium M processors, specifically made for laptops to maximize power efficiency.
- **Memory.** Requirements for internal memory in a laptop are no different than requirements for a desktop computer. Make sure your laptop computer has at least 1,024 megabytes of memory.
- **Hard disk.** Laptop computers typically come equipped with less hard disk space than their desktop counterparts. You can still purchase a laptop with more than a 100-gigabyte hard disk, and I suggest you do. Go for the biggest hard disk drive the laptop model offers. Keep in mind, though, for serious editing you're still better off keeping that big, clunky CRT and desktop computer back at your desk.
- **Display.** Laptop computers typically come with 14-inch to 17-inch displays. For editing nature photos, the bigger the better. If you can put up with a little extra size and weight, opt for a high-resolution 15.4- or 17-inch display. You'll be glad if you plan to spend a lot of time editing photos in Photoshop using your laptop.
- **Input/output (IO) ports.** I still recommend at least four USB ports and one FireWire port for your laptop (just like a desktop), but chances are you're not going to find too many laptops with that many ports. My laptop has three USB ports and one FireWire port, but that's rare. Most laptops come equipped with two USB ports, and only the higher-end models include a FireWire port. If you need additional USB ports, you can purchase USB expanders that, when plugged into one USB port, will "split" that port into four.

Choosing the Best Computer Displays for Working with Photos

When choosing a computer monitor for your desktop computer or as an external display for your laptop, there are a few specifications you'll need to pay attention to: type, size, and dot pitch. LCD displays are becoming more popular and have quickly replaced CRT (*Cathode Ray Tube*) displays as the monitors of choice. For photographers, CRTs are still the best choice.

CRT monitors offer the nature photographer better resolution, color, quality, and calibration. (You'll read more on calibration in Chapter 10, "Setting Up and Getting Around in Photoshop CS2.") LCDs look great on the desk, but CRTs are still the way to go for overall quality. If you're in the market for a better display for your computer, consider a CRT that is at least 19 inches and has a dot pitch of below 24. Computer displays are all rated by size and dot pitch. The lower the dot pitch (size of pixels), the better the quality.

Some higher-end monitors, such as the Apple 25-inch Cinema Display and the Sony Artisan, were designed for photographers, video pros, and graphic artists. These monitors are typically priced higher than your computer and are targeted toward the best video quality available. The Sony Artisan even comes with a built-in colorimeter to make sure the monitor is calibrated properly (see Chapter 10).

When choosing a display, strongly consider a large, high-quality CRT or a high-quality LCD.

The king of all computer monitors for photographers is the Sony Artisan.

Monitor Calibration Tools

A colorimeter is one of the most important tools you'll need to ensure that the images you're viewing and editing on your computer display represent what will be printed. A colorimeter is a color-measurement tool that attaches to your display. In conjunction with software, it is used to create a monitor profile your computer uses. When calibrating your monitor with a colorimeter, you're more closely matching the colors shown on your display to the print that's being churned out on your printer.

Popular calibration tools include the ColorPlus or Spyder2 from ColorVision (http://www.colorvision.com) and the Monaco EZcolor and OPTIX solutions (http://www.xritephoto.com). You'll find that investing in these tools will be well worth the price, and calibrating your monitor will save you money by reducing the amount of paper and ink used in a "trial and error" process.

Auxiliary Storage

I've found that an external hard disk drive is a necessity for nature photographers. We tend to shoot many more photos than other types of photographers, and often we take tens, if not hundreds, of photos in one location. Today's digital cameras can capture anywhere from 8- to 16.7-megapixel images that translate into large files of 6 to 17 megabytes each! It won't take long to fill up a 160-gigabyte hard disk with files of that size. My laptop is equipped with a 100-gigabyte hard disk, and I use external hard disks of 160 to 300 megabytes to perform daily backups and to use as my "near-online" storage of my image libraries.

If not for the purpose of auxiliary storage of your images, I strongly recommend having a large (300-gigabyte) external hard disk to perform daily backups of your computer's hard disk drive. These external drives don't cost much, but they will ensure that your valuable images and computer data will be protected. There are two types of computer users—those who have lost data and those who will. Protect yourself!

Choosing and Using Optical Drives

Writable optical drives have become standard equipment on most computers today. At a minimum, optical drives can read and write CDs and DVDs. There are still a lot of CD-readable/writable drives out there that will read DVDs, but not write to them. My recommendation is to make sure you have an optical drive that can write both CDs and DVDs.

CDs hold a little less than 600 megabytes of data—enough to hold all the photos stored on a 512-megabyte memory card. DVDs will store nine times that amount, at about 4.5 gigabytes of storage. That's a full day's worth of images taken at your favorite location, raw images or fine JPEG quality, with room to spare. As megabytes increase with advances in digital camera models, you'll need the extra storage space DVD-writable optical drives offer. If your computer is only equipped with a CD-readable/writable optical drive, consider upgrading to a new DVD-writable internal or external drive.

Using Graphics Tablets

Nature photographers have a tendency to edit fine details in Photoshop. Almost all of us are used to using a mouse to navigate around our computer. You'll find that many professional retouchers (yes, there are pros dedicated to retouching photos!) use finer tools to navigate around fine details of an image. The tool of choice is a graphics tablet.

Graphics tablets offer much more precise control for editing photos in Photoshop than a mouse does. Photo courtesy of Wacom Technology Corp.

A graphics tablet gives you much more precise control over the brushes and tools you use in Photoshop. It's like retouching an image with a

pen or paintbrush in your hand, and the stylus is even pressure-sensitive. Wacom Technology (http://www.wacom.com) offers a great line of graphics tablets starting at small sizes of 4 5 inches and going all the way up to larger sizes, such as 6 8 inches or larger. For the price of a good memory upgrade, consider swapping your mouse out for a graphics tablet.

Faster Downloads with Card Readers

One other goodie I recommend for any digital photographer is an external card reader. Digital cameras come with USB or FireWire cables that connect to your computer so you can download memory cards directly from your digital camera. This method works fine, except it's slow and drains the digital camera's battery power. For less than the cost of a tank of gas (okay, for an SUV with a 30-gallon tank), you can purchase a card reader that connects directly to your USB port and downloads your memory cards a lot faster than if you directly connected your digital camera to your computer. Card readers typically accept all the popular card types—CompactFlash, SD, XD, and even Memory Stick.

Summary

Equipping your permanent and portable digital darkrooms can get expensive and can drain your funds faster than you can say "lawyer" or "insurance company." You don't need all the bells and whistles at once, but I do recommend you buy the fastest computer you can afford with a writable DVD drive, 1,024 gigabytes of internal memory, and a backup external hard disk to start. With the hundreds or thousands of nature photos you take a year and the computer resources Photoshop requires, you'll be glad you did.

3

Outfitting for the Outdoors

Nature photographers have special requirements for shooting than other types of photographers do. We brave the elements and have to travel, hike, swim, fly, and boat to our locations. Often we are out in the field for days or weeks at a time. We have to pack tripods, clothing, camera bags, protective equipment for our cameras and lenses, batteries, filters, cleaning supplies, trail mix, Hostess cupcakes (smile), and water. Not exactly a list of equipment to haul if you're equipping yourself for a two-hour portrait shoot. Not that there is anything wrong with that; I shoot portraits all the time!

The traveling nature photographer also has to deal with how to download, back up, and manage large image files during extended periods out in the field. There might be locations in which you don't have access to an electrical outlet where you can plug in a laptop. Unless you're carrying a number of 2-gigabyte cards with you, what do you do to protect your images?

Preparing for shooting in the outdoors can be a task, and in this chapter I intend to shed some light on some of the gear that will make your nature photography adventures a little easier and safer.

Tripods for Nature and Landscape Photographers

As a nature photographer, I shoot 98 percent of my photos on a tripod. It's a habit I grew into years ago and I can swear by the results. A tripod is the second most important piece of equipment you could ever use; the first most important piece of equipment is a *good* tripod.

To help drive my point home, I'll tell you a little story. While out on a recent photo trip to the American southwest with my travel group, the Red Rock Five, I was shooting some scenes at Monument Valley, Utah. One scene, shown in Figure 3.1, was particularly difficult. I tried different angles, but our tour leader had a better idea—get as low as you can to obtain a better angle. It was a great shot, but I got lazy and thought I had enough light for a sharp photo, even at f/22, so I hand-held the shot so I didn't have to reconfigure my tripod. Wrong! I noticed after I got the photo in Photoshop and zoomed in that parts of the frame were not focused to my taste.

Figure 3.1 This photo was taken without a tripod. Further examination after zooming in shows where the image is "soft" and not too sharp. This is bad if you want to enlarge your photo to larger than 8 10 inches.

Different Tripods for Different Folks

When friends ask me what type of tripod they should get, I get stumped. That blank and confused look briefly appears on my face until I formulate an answer in my head. After composing myself, I break the rules and answer a question with a question: What type of shooting do you do? You see, I can recommend a number of different models of tripods, but the answer depends on what type of shooting people do, how physically fit they are (some of these three-legged wonders can weigh a lot), what type of camera equipment they haul, and finally, how much money they have to spend on one.

If you don't have a tripod or you feel you need to upgrade the one you have, keep the following criteria in mind:

- **Camera type.** The type and weight of a camera greatly determines the tripod you can use. Nature photographers often take long hikes and prefer to carry the lightest tripod, but one that is sturdy enough to reduce any vibrations. If you're shooting with a compact digital camera such as the Canon G6, Nikon Coolpix 8800, or Sony DSC-F808, you're probably not going to need a 12-pound tripod; a lighter-weight tripod should do the trick. The Hakuba MAXi-343E, shown in Figure 3.2, weighs just 1.9 pounds and is easily strapped to your camera bag for those long hikes. If you're using a lightweight camera, one of these sturdy, lightweight tripods should do the trick. I should know; I traveled across Wales and England with one this year, and it was a pleasure not to haul a 10-pound tripod along. I was shooting with lightweight cameras and lenses, and the Hakuba served me just fine.

Figure 3.2 Hakuba sells sturdy, lightweight tripods that fold to 17.5 inches and weigh less than two pounds. This is perfect for use with a compact digital camera, such as my Nikon Coolpix 7900, shown here.

- **Weight.** The one determining factor that's more important than most others is the amount of weight your tripod has to support. Although my Hakuba was great for a compact digital camera while traveling abroad, most of my shooting in the field is with digital SLRs and big, heavy pro-model zoom lenses. The combined weight of my digital camera and zoom lens exceeds five pounds, and I opt for my Manfrotto 3221WN Wilderness Tripod, shown in Figure 3.3.
- **Material.** Another consideration in your decision is the material your tripod is made of. Metal is less expensive, but if you can, you should seriously investigate purchasing a carbon-fiber tripod. These carbon-fiber models are becoming very popular with nature photographers; they weigh a lot less than metal and are a pleasure to take on extended hikes. Be prepared to spend 50 percent more for carbon-fiber models though; they are more expensive, but to many of us they are well worth the price if our nature photography adventures take us on extended hikes.
- **Versatility.** I hate using that word—it sounds like I'm in advertising, which I'm not. However, one of the features you want in a tripod is versatility—the ability to not only extend the legs wider than the standard setting, but also to use interchangeable tripod heads. For shots where you need to get down low to the ground, you need a tripod with legs that can extend outward, allowing you to mount your camera only 12 inches or so off the ground. I've found this feature extremely valuable in the field. On some models, you can even reverse the tripod stem and mount the camera upside down.

Figure 3.3 The Manfrotto 3221WN Wilderness Tripod is sturdy enough to handle any digital SLR and lens combination up to 13 pounds, but it weighs more than eight pounds with a head.

It's All in the Head

When you make a decision about a tripod, the next thing you'll need is a tripod head. The same rules used when selecting a tripod hold true for selecting a tripod head. You'll need to take into consideration the weight of the equipment you'll be attaching to the head, the type of head that will best fit the type of shooting you'll be doing out in the field, and of course, the price.

Basically, there are two types of tripod heads nature photographers prefer:

- **Pan and tilt heads.** Pan and tilt heads are the most popular tripod heads used by photographers, and for most of your nature shooting, a pan and tilt model should serve you just fine. Pan and tilt heads allow you to move your camera vertically and left to right (for panning), and to flip your mounted camera to the vertical position for shooting in portrait mode. Figure 3.4 shows a Manfrotto 3030 Pan/Tilt Head attached to my Manfrotto 3221 Wilderness tripod. It's a sturdy head, more than a match for my heavy lenses.

Figure 3.4 The Manfrotto 3030 pan and tilt tripod head is a very sturdy model that will serve most nature photographers' needs.

Whatever tripod head you choose, make sure you purchase a quick-release model. A quick-release trip head lets you attach a plate to your camera's tripod socket, which in turn is inserted into a slot on the tripod head, and then secured with an easy-to-use clamp you can tighten with your thumb. Quick-release heads let you attach plates to multiple cameras and lenses with tripod mounts, giving you a fast option for changing cameras or lenses without screwing in your camera to a tripod every time you want to use it.

- **Ball heads.** I've had other nature photographers bug me because I'd often travel with only a pan and tilt head attached to my tripod. Finally, on a recent trip, I tried a ball head. I immediately fell in love with its versatility, and I can see why users of ball heads brag. They are fun to use and give you better flexibility for shooting wildlife or scenes where you have to point your lens high, toward the sky. Figure 3.5 shows the Manfrotto 484 Ball Head, like the one I've used in the field.

Figure 3.5 The Manfrotto 484 ball head is a popular model among nature photographers.

Caring for Digital Images in the Field

One situation portrait or backyard photographers (that could be us sometimes) don't have to worry about is what to do with our digital images while we're away from our digital darkroom. At some point, you've probably been hundreds or thousands of miles away from home, taking hundreds or thousands of digital images, and been faced with the predicament of how to download images. You do have some options:

- **Bring plenty of memory cards.** I've done this before—leave on an extended trip overseas and decide to leave the computer at home. You'll need to make sure you have more than enough memory cards, but for the cost of purchasing a dozen or two dozen cards, you're probably better off investing that money into one of the other options explained here.
- **Bring your laptop.** If you're fortunate enough to have a laptop computer with decent memory, disk space, and a CD or DVD burner, you can download your images daily and make backups to CD or DVD while you're at it. When you're not out shooting, you can even play with your images in Photoshop or rearrange your fantasy football team!
- **Purchase an offline image storage/viewer.** Like I showed in Chapter 1, the Epson P-4000 or Nikon COOLWALKER offline storage viewer (see Figure 3.6) is a great accessory to carry in your camera bag, and it doesn't have the size or weight a laptop computer has. These little wonders sport large-capacity hard disks, from 30 to 80 gigabytes of storage. The Epson P-4000 also has slots for CompactFlash, SD cards, 80 gigabytes of hard disk space, and a 3.5-inch high-resolution display. The Epson model will even store music files and movies for playback. For extended travel when you don't want to lug around a laptop with your luggage, an offline storage device is a perfect companion for the digital photographer.

Figure 3.6 The Nikon COOLWALKER and Epson P-4000 are great additions for your camera bag and good alternatives to bringing a laptop computer out with you when you are shooting in the field or on extended trips. Photos courtesy of Nikon USA and Epson.

Camera Backpacks and Bags

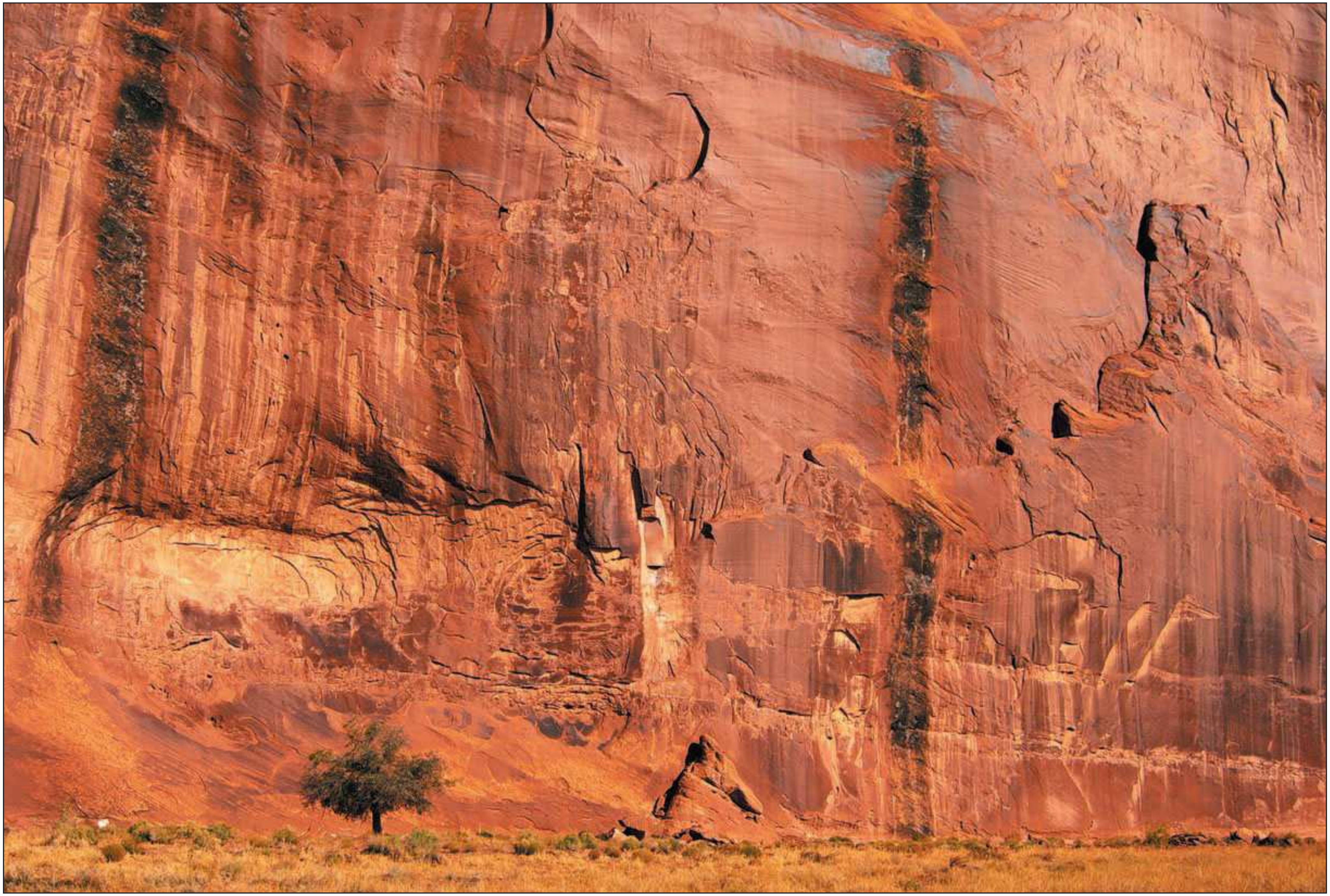
While traveling, hiking, or just driving to a local park for some nature shots, nature photographers need to haul cameras, lenses, and accessories. We all have camera bags—some are suited for the field, and some really aren't. A good camera bag can be the nature photographer's best friend (see Figure 3.7).

Like ice cream, digital cameras, and computers, camera bags come in all sort of flavors. You can choose shoulder bags, backpacks, hard cases, and even models that have storage room for a laptop computer. When choosing a camera bag, nature photographers have to take a few things into consideration. Try to take a few criteria into account when choosing a camera bag for your photo excursions.

- **Type of camera bag.** Some nature photographers prefer not to carry a camera bag into the field at all. I've seen a lot of photographers leave their camera bags in the car and opt to wear a photo vest instead. They look cool too, but if you're toting more than one digital camera and an assortment of lenses, a shoulder bag or backpack is probably the way to go. I personally prefer a backpack model that's waterproof and large enough to hold either my monster Manfrotto 3221 Wilderness tripod or, even easier, my Hakuba 343 compact tripod like my setup shown in Figure 3.8.
- **Size.** When choosing a camera bag, size does matter. Some of these models are big enough to carry multiple cameras, large lenses, and even a laptop computer. If you're athletic, over six feet tall, and have a strong back, one of these bags could be right for you. Be careful, though; after you load one of these large bags with equipment, it might be too heavy to carry! Make sure the size is right for you and you're not going to break your back carrying that bag around while out in the field.
- **Waterproofing.** If you're out shooting scenes in all types of weather, consider choosing a camera bag or backpack that's weatherproof. Many bags, such as the Lowepro, designate in their model names "AW" for all-weather. Some even come equipped with built-in rain covers.
- **Tripod straps and pockets.** Many computer bags and backpacks have straps or pockets to which you can firmly attach a folded tripod. I think this feature is a must for long hikes; the ability to strap my tripod securely to the backpack makes long hikes a lot easier.

Figure 3.7 Nature photographers often prefer camera backpacks to take on their travels. The Lowepro CompuRover AW (all-weather) gives you a weatherproof backpack for your camera and computer gear, all in one. Photo courtesy of Lowepro.

Figure 3.8 I prefer the Lowepro Mini Trekker. The backpack is big enough for my digital SLR, three or four lenses, filters, trail mix, bottled water, and either one of my tripods strapped in. As a bonus, I can protect my bag from wet weather with a built-in rain cover.



Clothes on Your Back and Shoes That You Wear

I'm not what you might call a well-dressed man. My typical outfit consists of jeans, black t-shirts, and moccasins, except when shooting nature photos in the field. Depending on the type of shooting I'm doing and the typical weather conditions, I transform my wardrobe to accommodate the conditions at hand. When shooting in the field, you'll need to outfit yourself with appropriate clothing, or your outing can become a miserable experience.

When getting ready to venture out for nature shooting, keep these ideas in mind regarding clothing.

- **Shoes and booties.** I consider wearing the appropriate footwear just as important as using the right tripod for the job. For short hikes (a few miles or less) in any terrain, I'll always recommend low-cut hiking shoes. I wear the Columbia Omni-Grip type. These boots (or pairs like them) are lightweight, moisture-proof, and have great soles for hiking in rocky, sandy, or grassy areas. For longer hikes, the kind that take days to do, I recommend more appropriate boots designed for hikers. See your local outfitter for more recommendations.
- **Pants and shirts.** Any sports store or outfitter will offer pants and shirts that are designed for extreme outdoor conditions for any season. Strongly consider visiting these stores; you'll be amazed at the offerings. It's a good idea to have separate sets of clothing tailored toward winter, spring, summer, and fall. For winter garb, go for warmth first, weight second. For spring, look for layered shirts/sweaters, and for summer, choose lightweight shorts, pants, and shirts.
- **Hats.** Being follically challenged, I especially need to wear hats on sunny days. Whether you're spending very short periods of time or extensive hours out in the sunlight, the sun is a sure recipe for skin problems ranging from sunburn to, even worse, skin cancer. Make sure you protect your head and face with a good hat. Baseball hats are okay for short excursions, but wider-brimmed hats offer better protection for your face and neck. Always carry sunblock with you and use it wherever possible—in all seasons, just not summer.
- **Jackets**. I'm a big fan of those new-fangled fashion-correct ski jackets by Columbia, Head, Lands' End, and other higher-end sportswear outfitters. They offer jackets with removable layers, perfect for ever-changing outdoor conditions and for the outdoor photographer. If you're out shooting in the winter, pay attention to what skiers wear—they know how to keep warm in the extreme elements!

- **Gloves.** Unless most of your outdoor shooting is done in warm climates or during the summer, you'll need some good-quality waterproof gloves. I prefer gloves that offer warmth, moisture protection, and rubber bases to make it easier for me to fiddle with knobs and buttons on my digital cameras. When I'm out shooting in temperatures warmer than freezing, I prefer gloves with the fingertips exposed. Carry both winter and fingerless gloves with you in your camera bag.

Ideas to Keep You Safer

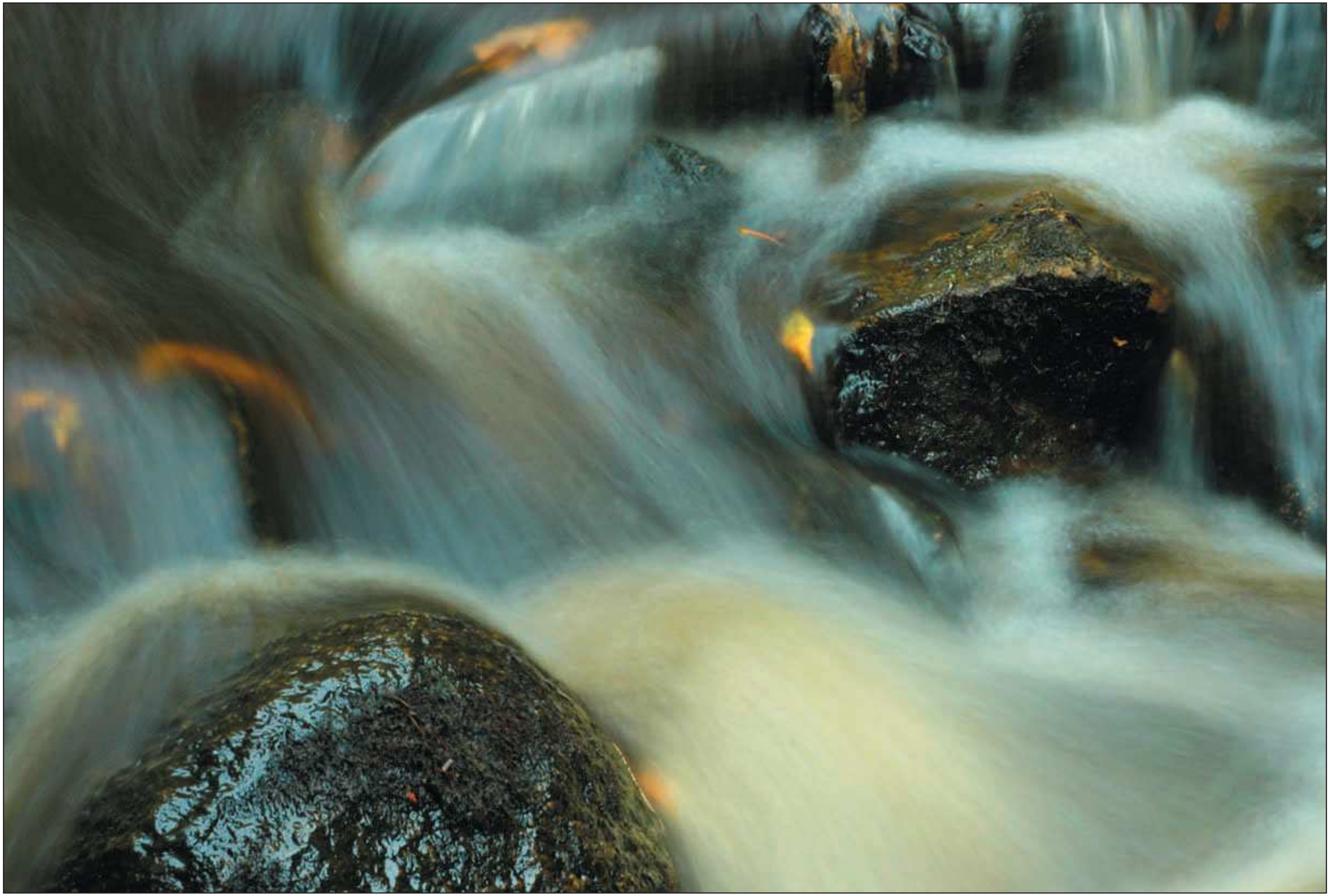
As a nature photographer who has ventured into all sorts of distant and not-so-distant places over the years, I've become more and more aware of safety while out in the field. As an example, I often travel to Michigan's Upper Peninsula for landscape shooting. It's a five-hour drive from southern Michigan to northern Michigan, and it really is different terrain between the two.

When I returned from one of my photography trips to the north, a friend of mine viewed photos I had captured. Being from Michigan's Upper Peninsula, he asked what I was "packing" during my long hikes through the wilderness. I then described the camera equipment I used, and he immediately interrupted me and said, "I'm not talking about camera gear; I'm talking about firearms." I was not aware that in certain parts of the region, there are many black bears roaming around. If you mistakenly walk into an area where there are little bear, the mommy bear can get quite upset. I didn't realize this, but I'm not a gun person. Since then, I always make sure I hike in areas where I'm not in danger of coming across local residents that have black fur and big claws.

As a rule of thumb, always keep safety in mind and don't venture into areas unless you know of all the dangers involved. Educate yourself to the wildlife that is common to the area, and plan your photography accordingly.

A few safety tips I have for you when you are out in the wild include

- **Carry a cell phone.** Whether you're traveling alone or with other people, keep a charged cell phone on your person at all times. If you are venturing to areas without cell coverage, like nature photographers often do, consider purchasing or renting a satellite cell phone.
- **Carry two-way radios.** If you're with another person or a group, carry two-way—or better yet, multiple two-way—radios with you. Newer models will reach miles, and when you're with a group that splits up during photo excursions, it's a good idea to pass these radios out to the different groups. You always want to be in communication with those you travel with for safety reasons.



- **First-aid pack.** It never hurts (sorry for the pun) to have a small first-aid kit in the car or in your backpack when you're traveling. You want to make sure you have a supply of Band-Aids and assorted over-the-counter meds to help you with bug bites, cuts, and other ailments.
- **Leave an itinerary.** Whether you're traveling alone or with others, always leave your itinerary with loved ones or with the clerk at the hotel at which you're staying. If you travel to national or state parks, check in at the ranger station and let them know where you are planning to hike or drive to. Make sure to check in with them when you return! If you are a nature photographer, you should always let someone know where you are going and when you intend to return.

Summary

Outfitting for nature photography not only means equipping yourself with appropriate digital camera equipment, but also outfitting yourself for comfort and protection from the elements. In addition to equipment and clothing, I also categorize safety when outfitting for an outing. Don't underestimate safety, and always take precautions for yourself and others who may be traveling with you. Remember, an ounce of prevention is worth more than a pound of cure. When it comes to your well-being, outfit yourself with the best protection possible for your nature-photography outings.

4

Shooting Landscapes

Ah, the feeling of looking miles in any direction, not a soul in sight, awestruck by the natural beauty around you. When you get there, you'll know it—an epiphany, as nature photographers often get. It's those moments that make it worthwhile. Getting the shot helps, too—something that causes you to beat your chest like a gorilla after you review it on your LCD. Don't forget, getting there is half the fun—the other half is shooting the scene with your camera (using good techniques, of course!), and then getting home to finish the images off in Photoshop. The memories don't end there, either; when reviewing my nature photos and all the landscapes I've visited, I'm instantly reminded of the moments and the people I've traveled with in those special locations.

This chapter is all about shooting grand (and maybe some "little" grand) landscapes. It will cover getting there, knowing the light, composing the shot, and fiddling with all those settings on your digital camera. Remember, getting there is half the battle and half the fun, like climbing a mile and a half of rough, rocky terrain to get to Delicate Arch, shown in Figure 4.1.

Figure 4.1 Delicate Arch is within Arches National Park, Utah, but getting to this "Holy Grail" of western outdoor photographers is another story. The hike is not for the faint of heart, consisting of a mile and a half of steep ascent in rocky terrain, but it is well worth the shot if you get there at the right time.

Finding Locations and Beating the Crowds

One of the great things about being a nature photographer is all of the endless photographic possibilities we have on this Earth of ours. Some of our biggest challenges include picking the spots to photograph, getting there, and knowing the best times to practice our craft. Some of us have more time than others to photograph landscapes, as well as more freedom to travel. Most enthusiasts, however, have day jobs or other responsibilities that restrict their travel and photography opportunities.

Whether you have all the time (and money) in the world or you are restricted to when you can shoot, some challenges still apply to all of us.

- **Pick your spot.** If you're going to venture away from home and travel, pick a region that is rich in photo opportunities. You may have been thinking of a region for a long time, and researching areas is easy now with the aid of the Web, so planning trips is much easier than it was 10 years ago. You can easily book flights and hotel rooms online without having to wait for a travel agent to get into the office the next morning.
- **Don't forget the critters.** If you're planning to primarily shoot landscape photos on your venture, consider the wildlife that's present in the region you've chosen to shoot and plan for some wildlife shooting (with a digital camera!) while you're there. As an example, while out shooting in Arches National Park, my group came across deer (see Figure 4.2) while shooting rock formations at sunset. We weren't there for the wildlife, but we enjoyed 15 minutes of casual shooting when the deer wandered into our area. Be prepared for venturing creatures!

Figure 4.2 When you are shooting landscapes, be prepared at all times for wildlife that may walk through your frame or even behind you.

- **Plan your trip.** Don't underestimate the importance of planning trips in detail, especially if you're venturing out for more than a couple days. Give yourself plenty of time to get there. If you're going to have to fly across the country, or even out of the country, plan on your first and last days as travel days. In other words, you're going to be busy getting to an airport or bus station rather than out in the wilderness shooting. Keep some simple rules in mind, such as knowing when it's deer-hunting season. You don't want to be out there with those orange-clad gun-toting outdoorsmen (and outdoorswomen) when they've been drinking beer for days at a time, they haven't bathed, and they're carrying loaded rifles.

  I like traveling in the off season to avoid the crowds. I don't think I'd ever plan a trip to Mt. Rushmore, for instance, on Fourth of July weekend. You can't even get a hotel room within a hundred miles of the park, or really anywhere else. I'd never schedule a Southwest trip in the summer—not only are the parks extremely crowded, but it's really hot! Early spring and late autumn are prime times to plan your trip—the summer crowds are gone and you might even be able to get close to Mesa Arch in the Canyonlands of Utah. You definitely want to get your shots without 50 tourists trying to capture the sunrise and blocking your view—not fun when you're trying to get serious work done at yet another "Holy Grail" of the Southwest photo, such as the one shown in Figure 4.3.

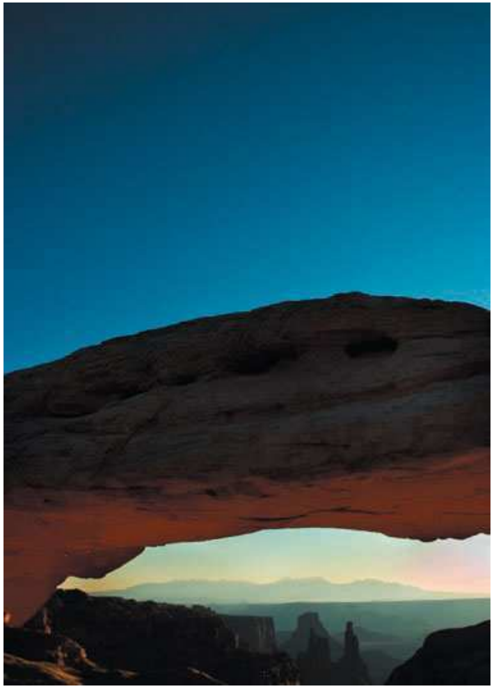


Figure 4.3 Know the optimum times of the year to travel to your target destination. Beat the crowds, and you might even be able to get close enough to capture coveted shots, such as Mesa Arch.

- **Schedule your days.** Before departing, you will want to schedule each day's activities. Trust me on this one. You want to maximize your time at each location, and the best way to do that is to write a day-by-day itinerary. Take bad weather, travel time, location scouting, meals, and rest (nappy time) into consideration as well. If you're going to visit the national parks—there are more in North America than you can ever cover in a lifetime—visit their Web sites to find out where the highlights are. You can also find

out how long it takes to travel to different parts of the park, and many Web sites offer information about how long typical hikes or driving tours take. Don't forget to take your shooting times into consideration! That's what you are there for!

For more information on national parks, visit http://nps.gov/parks.html. The Web is full of great resources, and chances are you'll be able to click through a lot of worthwhile information you can use for scheduling your days ahead of time.

- **Scout locations.** When you hit the ground, try to take some time for scouting good locations. I try to use midday for driving around to find locations, especially on days with poor lighting, such as high-noon bright sun. I log the area and judge what part of day the lighting may be better, such as early morning or late afternoon, when the lighting is more dramatic. Bring a compass with you so you can calculate in what direction the sun will be rising and setting.
- **Look for the best light.** When shooting landscapes and nature, light is everything. Plan and time your shooting for the optimum lighting conditions. If you want to shoot Mesa Arch, you need to arrive before sunrise. I'd recommend an hour before the sun rises—not just to get there on time, but also to get a good spot. It's a popular place and it gets very crowded, to the point where you may not get a good enough spot to shoot. From my experience, only about 10 photographers can fit into the small area available, and only three of those 10 photographers get a good spot.

  In addition to scoping out the best sunrise shots, look for good sunset shots too. On good-weather days, you only have about 15 minutes total of that "magic light"—the time just before the sun rises above the horizon, as in the photo shown in Figure 4.4, and

Figure 4.4 The "magic light" is the time just before sunrise or the few minutes just after the sun sets over the horizon. You can get dramatic colors at those times, but usually only for a few minutes.

the time when the sun dips below the horizon in the evening. I start shooting before the sun rises and after it begins to set. Light changes by the second, and I always try to be prepared for whatever nature provides.

- **Have a weather backup plan.** At times, all good plans can turn to muck. For shooting nature and landscapes, don't waste a rainy or stormy day watching Oprah on the TV back at your hotel—get out and shoot the weather! You can add some dramatic shots that you would never get just by taking advantage of what nature gives you.

  If you're planning to visit a number of locations in a day but you get weathered out, stick with it. Rainy days are great for forest shots—the wet weather darkens the trees and provides great contrast of extra-saturated colors you'll often see on rainy or misty days. If it's pouring rain, shoot some landscapes through your car window. If you're patient, you might get brief breaks in the weather, giving you some time to get out of the shelter and set up your digital camera on your tripod to get some shots, like the one in Figure 4.5.

Figure 4.5 If rotten weather threatens to ruin your outing, take advantage of it and make the weather your subject matter.

Light Is Everything

For all photographers, the most important part and the most difficult part to master is getting the right lighting for landscapes. Portrait photographers get to create the light they use for their subjects with a mix of natural and studio lighting, but nature photographers have to rely on what the particular nature conditions provide. Though it's not possible for the landscape photographer to control light, it is possible to arrive at scenes when you know the light might be optimal.

If I'm out shooting landscapes, I pay particular attention to the clouds and how the light is reflecting off my subject. I especially like partly cloudy conditions in the middle of the day because shadows are cast on my subjects while streams of light break through, like in the landscape shown in Figure 4.6. When the clouds are rolling over, be patient and wait for the light that's illuminating your subject to change; you'll be pleased with the results.

Figure 4.6 Knowing when to capture the light is important. Be patient, and the clouds will clear eventually!

Don't Let Bad Weather Ruin Your Day

When the weather gets bad, like when there are clouds, rain, or rough storms, it's not time to put the camera bag back in the closet. Some of your most dramatic shots can come from bad weather. Don't let the rain or wind ruin your day; get out and shoot the weather.

While out on a fall color shooting trip to northern Michigan last year, I ran into weather that consisted of storms and 50-mph sustained winds for more than two days. Instead of staying in my travel trailer watching cable TV (yes, I was really roughing it!), I decided to get out and shoot what I could. All it took was a drive to the lakeshore, and I found what I wanted: high winds and beach grasses. Yes, my digital camera and I were pelted with sand blowing in the 50-mph wind gusts, but the shooting was worth it, and I was pleased with the almost abstract results I got, like in the photo on the previous page.

When the weather gets rough, I also point my lens upward and just shoot the sky. The sky is one of my favorite subjects and is often overlooked by many nature photographers. When storms are coming, take some time to just look up and make the sky the subject, rather than the landscape below it. Figure 4.7 shows some of my more recent "skyscapes."

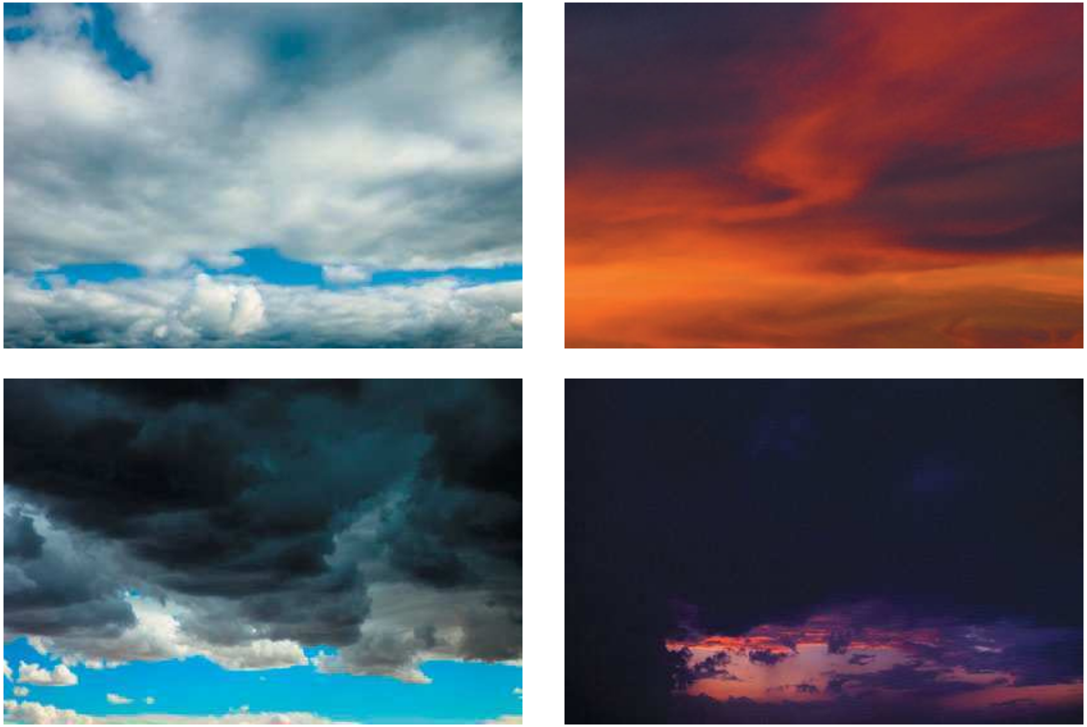


Figure 4.7 Stormy weather makes for interesting skies. Point your lens upward, set your aperture at f/8, and use the sky as your subject.

Other tips for capturing great nature photos in bad weather include

- **Shoot foliage after it rains**. I don't recommend grabbing your digital camera and tripod to run into the forest during a rainstorm, but right after the rain stops is a great time to shoot foliage. You'll often get some dramatic lighting from the sun peeking through remaining storm clouds, and the moisture will darken trees for better contrast. Don't be reluctant to capture reflections off your subject or shoot with the light coming at you directly; you can get some interesting shots, like the one shown in Figure 4.8.

Figure 4.8 Lighting can get interesting after a rainstorm. Be creative and take advantage of unique lighting conditions.

- **Use a circular polarizer.** As opposed to making reflections part of your subject, you can reduce reflections off of foliage or other subjects by attaching a circular polarizer to your lens. Rotate the polarizer to the point at which you see reflections start to decrease and colors start to saturate. Experiment with your polarizer, but be careful not to oversaturate your subject, resulting in unnatural colors or skies that are too dark.
- **Implement the 360-degree rule.** If you're out shooting during or after a rainstorm or snowstorm (or when you're shooting any subject matter), implement the 360-degree rule. You might be out shooting grand landscapes, but take a 360-degree view of the area you're in. Look up, look down, and don't forget the little things you normally wouldn't think of shooting, as shown in the close-up in Figure 4.9.

Figure 4.9 By taking the time to observe all of the surroundings when you're out taking photos, you'll discover subjects to photograph that you might not have seen without implementing the 360-degree rule..

- **Shoot the wind.** If high winds (which often accompany storms and bad-weather days) are a problem when you are trying to get sharp photos of trees or grasses, don't give up! Slow that shutter speed down on your digital camera by shooting at a small aperture, such as f/16, or switch to shutter priority mode and choose a slow shutter speed. Extremely blurred scenes can make for dramatic photos, such as the windblown grass in Figure 4.10.

Figure 4.10 Don't let high winds detract you from capturing landscapes. If the winds are high, slow down your shutter speed and capture the movement of grasses or trees. Add extra color in Photoshop to "punch up" the image, and you can get some wonderful abstract landscapes.

Composition for Landscape Photos

Techie stuff is great to discuss, and there are a lot of photo geeks like us out there who can be considered "gear heads"—that is, digital photographers who hunger for all the technical knowledge about megapixels and electronic wizardry. All that techie stuff is fine to talk about in forums or in camera clubs with photographer friends, but all that electronic stuff ain't worth a hoot when you get out in the field unless you have an eye for good composition.

To the nature photographer, composition is just as important as getting camera settings right. (See the next section for more on this.) Having the correct white balance, aperture setting, shutter speed, ISO, and focus is a must, but unless the composition in the actual scene you are capturing is set up correctly in your viewfinder or LCD, you won't get the results you want in your photograph. Knowing how to set up a scene before you take a shot is key to making great nature photos.

There is a lot to be said about traditional photographic rules. I adhere to them often, but sometimes I like to break them, depending on the subject matter. In my early years, my photo knowledge was basically self-taught, consisting of a lot of reading and trial and error. However, I continually came across a few basic rules of composition.

- **Use the rule of thirds.** The rule of thirds tells you that a landscape photo, whether it's in landscape or portrait orientation, needs to be divided into three parts. Consider a landscape photo in which you have the foreground, the subject, and then finally the sky, as illustrated in Figure 4.11.
- **Don't divide your photo in half.** This rule is simple; if you're shooting a photo, make sure you don't frame in two equal halves. For instance, for a simple landscape, balance your photo to show more sky or more of the subject, but don't give each an equal half of the frame, like in the bad example shown in Figure 4.12.

Figure 4.11 Illustrating the rule of thirds, this photo of the Three Sisters in Monument Valley shows the foreground, subject, and sky, divided into thirds.

Figure 4.12 When composing your photos, make sure you don't divide the frame in half; try to show more of the top or bottom.

- **Offset your subject in the frame**. This rule means if you have a subject, large or small, try not to have the main subject perfectly centered in the frame, like in the first example photo in Figure 4.13; it's too typical! Cropping a centered image can give you a more dramatic effect for your photo.

Figure 4.13 Try to offset your subject matter in the frame to give a more dramatic image instead of keeping everything centered.

- **Keep everything in focus**. Another rule nature photographers often hear is to have every portion of a photo in focus. When photographing flowers or taking close-ups, I may break this rule (I like breaking rules from time to time) by keeping my aperture setting wide open and only keeping a portion of the photo in focus, like in the example shown in Figure 4.14.

Although rules are good to keep in mind when composing your nature photos, try breaking them once in a while. For instance, sometimes I like my subject matter perfectly centered. At times, I don't want the subject perfectly sharp; I like to blur portions of some of my photos. There may even be instances when I actually want my frame split into two equal halves. Rules were made to be broken at times, so don't be afraid to bend them a bit. You'll give yourself more latitude to be creative.

Figure 4.14 Sometimes a photo in which most of the subject is out of focus can draw more attention to the subject.

Making Camera Settings for Nature and Landscape Photos

The one thing the nature photographer needs to technically master is the controls on the digital camera he or she is using. I've stressed that the most important key to great photos is the composition, but you also need to make sure your camera settings are correct to make sure you are capturing your composition correctly. To do that, you need to know what settings are appropriate for each photo.

I get a lot of questions from many people who view my photographs, asking how I accomplished the shots. You've probably had that experience too—showing off your photos and having people ask you, "How did you do that?" My answer to them, especially if they're photographers, is, "I use a workflow for every shot I take."

I'll give the person a few seconds to compose themself from the curve I just threw at them—after all, he or she was expecting me to say something like, "I used an f/stop of 2.8 at 1/500 of a second." However, that's not how I take my photos. I go through a progression of steps, also called a *workflow*, when I'm out in the field shooting.

Shooting Workflow: Making Camera Settings

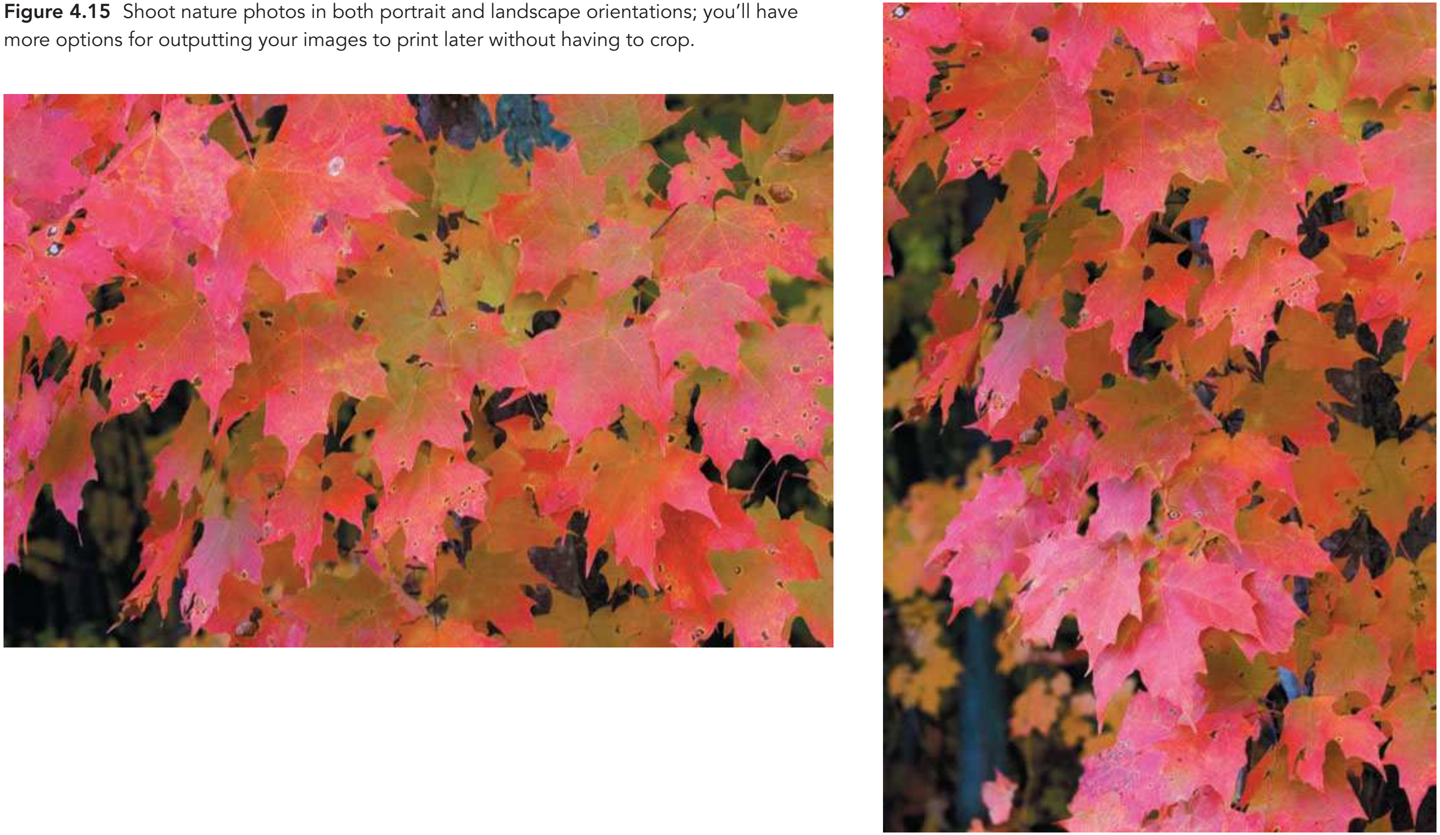
You need a workflow when you're shooting. Everyone's is a bit different, but this section includes some suggestions to get you on the right track.

1. **Evaluate the scene.** The first step in my shooting workflow is to evaluate the scene. Don't just slap your digital camera on your tripod and begin shooting; take a few seconds and *plan* how you are going to photograph the scene.

   Think about how you want to "construct" the photo. For instance, if you're shooting a grand landscape, you'll want to choose how you want to *meter* the scene. You'll probably either want to have your digital camera's light meter off of the sky or the subject. Additionally, you'll want to select your aperture setting and even white balance before you take the shot.

2. **Select orientation.** As a rule of thumb, I usually shoot almost all of my photos in both portrait and landscape orientations. The reason? Even though a particular scene might be best suited to "wide" or landscape orientation, there is a chance that I might need that image for a magazine or book article, which often dictates portrait orientation for full-page spreads. Additionally, I like to have both portrait and landscape versions of my scenes as a general rule because sometimes when I review photos later on my computer, I change my mind and actually like the other orientation better! Best rule for this step: Shoot your photos in both landscape and portrait orientations, like I did in Figure 4.15.

Figure 4.15 Shoot nature photos in both portrait and landscape orientations; you'll have more options for outputting your images to print later without having to crop.



3. **Place your digital camera on your tripod.** Even though you might have plenty of light and you can shoot at a fast shutter speed, don't be tempted to hand-hold your digital camera while taking the photo. As a reminder, always use a sturdy tripod for your nature and landscape photos. Your portfolio will include sharper photos if you do!
4. **Compose the scene.** The next step is to carefully compose the scene in your viewfinder (if you're shooting with a digital SLR) or your LCD. Keep in mind that when you're shooting photos outdoors, it can be difficult to view the scene on a digital camera's LCD. Most digital cameras also come equipped with viewfinders; don't forget that option to frame your scene. As I've mentioned, consider taking the photo in both landscape and portrait orientations.

   Take different versions of the shot by zooming in on the subject, and then zooming out. It's also a good habit to frame the scene, but leave yourself a little room—you never know whether you'll want to crop the image in Photoshop later. You don't have to zoom out of every shot—just a little bit is a good habit. If your digital camera packs a lot of megapixels, don't worry; you'll have plenty of resolution to allow for some cropping later.
5. **Choose the shooting mode.** Most digital cameras offer a number of different shooting modes for you to use. Nature photographers typically use aperture priority mode, allowing you to choose the aperture setting for the photo while the digital camera chooses the shutter speed for that aperture setting based on its internal light meter setting.

   The aperture setting dictates the amount of light and depth of field that passes through the lens. The aperture is actually a diaphragm that opens and closes according to the setting you've indicated. Small aperture settings are actually set to the higher numbers, such as f/16, f/18, or f/22. Small apertures give more depth of field or focus in your foreground, subject, and background. Large (or wide-open) apertures, such as f/2.8 to f/5.6, allow you to focus on the subject but get a blurred foreground or background, like in the photo shown in Figure 4.16. Figure 4.17 shows a photo taken with a small aperture, set to f/22 in order to obtain sharp depth of field throughout the photo.

   In addition to aperture priority mode, you can use shutter priority mode when you're shooting in situations in which your subject is moving and you want to freeze the action, such as when you're shooting wildlife. When you choose shutter priority mode, your digital camera automatically sets the aperture according to its internal meter reading. When shooting wildlife, I switch from aperture to shutter priority mode if my subject matter is on the move.

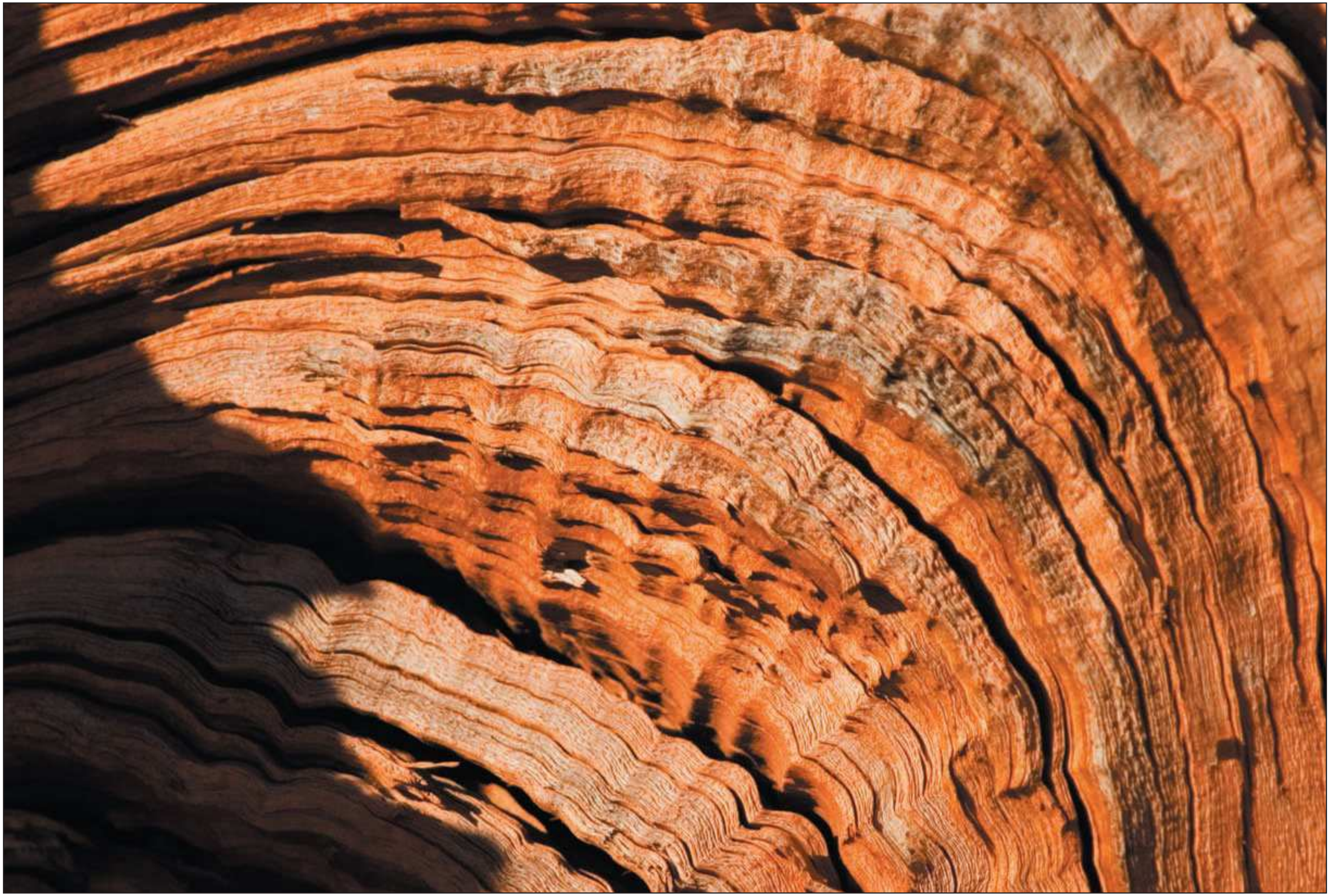
Figure 4.16 Using a wide-open aperture setting allows you to get a focused subject with a softened background.

Figure 4.17 Using a small aperture setting allows you to get a completely focused image from the foreground to the background, which is preferred for many landscapes.

Your digital camera will also offer preprogrammed modes, such as action, landscape, and portrait. When you choose these modes, your digital camera automatically sets the aperture or shutter speed according to the mode you've selected. For instance, if you choose landscape mode, your digital camera will automatically set the aperture at a small setting, such as f/16, and then set the shutter speed according to the metered scene. For portrait mode, your digital camera will use an aperture setting around f/5.6 for less depth of field. In automatic mode, your digital camera will set the aperture according to the median level of available light for the metered scene, and then set the shutter speed accordingly. I only use automatic mode for quick snapshots.

Manual mode is used to take photographs in situations in which your digital camera's meter can't evaluate what you want to capture. I often use my digital SLR's manual mode, in which I select both the aperture and shutter speed settings. Don't get me wrong—our digital cameras' internal light meters do a great job, but if you're shooting difficult lighting situations, such as the moon in the evening or sunrise at Mesa Arch (see Figure 4.18), you might be better off going by instinct and taking test shots of the subject in manual mode to achieve the results you're looking for in the image.

Figure 4.18
Sometimes you have to rely on instinct and use manual mode to achieve the correct exposure for a difficult image to meter. I shot this photo of Mesa Arch in manual mode, f/20 at 1/30 of a second.



For the most part, nature photographers often like to have control of the aperture setting and will often use aperture priority mode for most of their shooting. I shoot mainly landscapes and some wildlife (including people!), and I've gotten in the habit of shooting in aperture priority mode to give me the most control possible of my depth of field.

6. **Check ISO.** The ISO setting on your digital camera is comparable to the ISO rating of film (you know, that analog stuff we used to shoot with). ISO (formally referred to as *film speed*) is a numeric setting used to represent the chosen light sensitivity of your image sensor. Digital cameras typically let you choose ISO settings of 50 to 1600. Some digital cameras, such as the Nikon D70s, have a minimum ISO setting of 200; other high-end models have ISO settings that begin at 50. As a rule of thumb, you want to keep your ISO setting at the lowest number you can. If you're shooting in low-light situations, you might want to increase your ISO setting to 200 to 400 because this setting will allow you to increase the shutter speed. Keep in mind that the lower the ISO setting, the better the quality of images you'll get.

   On some older-model digital cameras, increasing your ISO setting to even 400 would result in very noticeable image noise. Image noise increases as your ISO setting increases; you can recognize it by those colorful speckled areas of an image. If I'm shooting outdoors, I always keep my ISO setting to the lowest number on my digital camera to ensure minimal image noise and maximum quality.

7. **Set white balance.** White balance is a feature of digital cameras that we didn't have with film. White balance lets you better adjust the camera to the type of lighting you are shooting photos with. The ability to set the white balance is one of the biggest advantages to shooting digital. You can adjust white balance to conditions such as cloudy, sunshine, shade, indoor lighting, fluorescent lighting, or tungsten lighting. All of these lighting conditions provide different types of lighting your digital camera has to interpret. Back in the old days when we shot with film, nature photographers would purchase film that was optimized for outdoor lighting situations. If you were shooting indoors with studio lights, you had to load special film into your camera so you wouldn't get photos with an incorrect color cast, which was difficult to correct in a color darkroom.

   How does your digital camera know how to adjust for the lighting type? By measuring the color temperature of the scene. Color temperature is measured on the Kelvin scale, with light being measured on a scale of 2,000 to 50,000 degrees Kelvin.

Now that you probably heard more than you wanted to about white balance adjustment, I'll tell you what you should do with the white balance setting on your digital camera. For most lighting situations, leave it on automatic! Your digital camera will usually do a great job of measuring the color temperature of the scene. I've discovered that when I use the automatic setting on my digital camera, the camera adjusts the color temperature correctly 95 percent of the time. For the remaining five percent, I manually set the white balance to the mode I think is best, then take a few test shots and view my results in the viewfinder, making any adjustments if necessary after that.

Figure 4.19 illustrates the difference among the different white balance settings your digital camera offers.

8. **Take the photo.** This seems to be a simple step…or is it? If you're shooting a scene at a slow shutter speed, do you press the shutter button with your finger? When you do press the shutter button on your digital camera, you're introducing vibration, which can decrease image sharpness. If you're shooting at slow shutter speeds (1/60 of a second or slower), use your digital camera's self-timer option or use a remote shutter release designed for your camera. The self-timer or remote shutter release will allow you to take the photo without introducing vibration to your digital camera.
9. **Review the image.** After I take a photo, I review the image on the digital camera's LCD. I check the preview in the LCD for sharpness first by using my digital camera's image-viewing zoom feature. I also check the image for composition, depth of field (aperture), white balance, and exposure using my digital camera's histogram feature.
10. **Take more photos.** After reviewing your photo, make any necessary adjustments, such as adjusting your aperture, shutter speed, zoom, or even your composition, and reshoot your photo. If you were pleased with the results, recompose the image for the other orientation (landscape or portrait).

    While you're at it, evaluate whether the scene you're photographing is a candidate for a panorama, shooting a series of three or four photos you can stitch together later in Photoshop.

As shot, 5000° Kelvin

Daylight, 5500° Kelvin

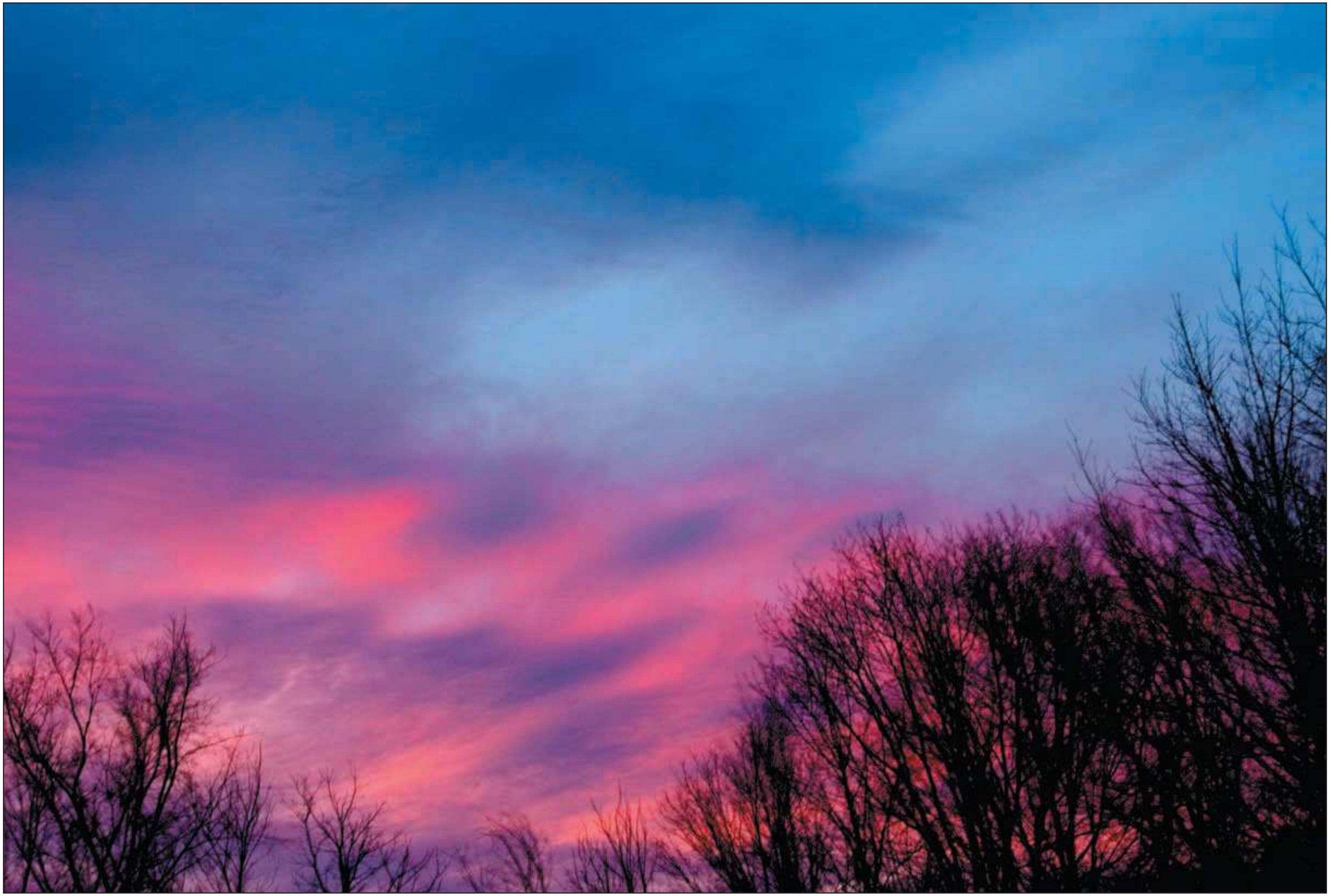
Cloudy, 6500° Kelvin

Shade, 7500° Kelvin

Tungsten, 2850° Kelvin

Fluorescent, 3800° Kelvin

Figure 4.19 White balance affects the color temperature of your photos, as shown when adjusted in Camera Raw. When you change the white balance settings on your digital camera, you're actually changing the color temperature and tint of your image.



Shooting Panoramic Images

Panoramas are becoming easier to accomplish because software easily allows digital photographers to stitch together separate photos taken in succession, like the sunset over Lake Huron shown in Figure 4.20. Whenever I'm out in the field shooting landscapes, I make a habit of evaluating my subjects for both individual photos and opportunities for panoramas as well. Whenever possible, I shoot a series of shots to stitch together later on my computer. I'm a fan of Photoshop's Photomerge utility.

Figure 4.20 Shooting photos for the purpose of assembling panoramas in Photoshop requires a step-by-step process.

Steps for shooting panoramic scenes include

1. **Select a scene that's either wide or tall.** When shooting panoramic images, don't get caught in the habit of automatically shooting them in landscape orientation. You can also shoot a series of photos with your digital camera in the vertical position! Shooting a series of photos in portrait orientation is good for putting together grand landscapes in which you want to frame more foreground or background, like in the photo shown in Figure 4.21. This panorama consisted of five portrait orientation photos taken in succession, then stitched together in Photoshop using the Photomerge utility.

Figure 4.21 Although most panoramic photos consist of three or four photos taken in landscape orientation, you can also shoot panoramas in portrait orientation.

2. **Use a sturdy tripod.** I always recommend shooting panoramas on a tripod. A tripod helps you achieve the sharpest photos you can, especially when you're shooting in low-light conditions in which your shutter speed is below 1/125 of a second. Shooting panoramas on a tripod also helps you keep your series of shots level. To keep your shots level, look through your viewfinder or LCD and pan the scene from left to right (or top to bottom) to make sure your camera is level. If you see that your panning is off, adjust your tripod head to level your camera as best as you can. You can always utilize a leveling bubble, which some tripod heads come equipped with, or even an add-on level that attaches to your digital camera's hot shoe.

3. **Meter the subject matter of the scene.** You need to have the same exposure for each photo taken in your panoramic series. I recommend first taking a meter reading of the major part of your subject matter, then using that aperture and shutter speed, switching to manual mode, and dialing in those settings. This will ensure that the exposure is the same for each photo sequence you shoot. Additionally, manually set your white balance to the conditions in which you're shooting, such as daylight, cloudy conditions, or shade, because as you pan, your digital camera might change the white balance setting.
4. **Take a series of photos.** To begin your series of photos to use in a panorama, start on the left of the scene you're shooting and take the first shot. Pan your camera to the right until you have overlapped the previous shot by 1/3. Take the second shot. Pan to the right again until you've overlapped the previous shot by 1/3 and take the photo. If your panorama requires a fourth frame, repeat the process, overlapping the previous frame by 1/3.
5. **Review your photos.** Using your digital camera's LCD, review your photos to make sure you achieved the results you intended. Check to make sure your images are sharp and properly metered, using the histogram to assist you in evaluating your exposure. Continue capturing different aspects of the scene to make sure you captured the panoramic frames you know will make a great panoramic.

Summary

Shooting nature photos isn't as easy as grabbing your digital camera and running into your backyard to snap some photos. I think digital photographers are a different breed who often do things other people don't do. We invest in outfitting for the outdoors (which looks cool—I like the style, personally), we lug around tripods with expensive heads, and instead of taking vacations with our families, we often travel to distant places to capture photos most people wouldn't even think of.

Getting there is half the battle, and using good shooting techniques is the other half. Getting the final images you want is worth all the bother you go through to get them. Use some of the tips and workflow suggestions discussed in this chapter to improve the quality of your images. Repetition of good technique and avoiding shortcuts are keys to becoming a better nature photographer.

5 Photographing Wildlife

Photographing wildlife is another form of nature photography that takes you to the outdoors. Like landscape photography, wildlife photography is an art in itself. I know of many photographers who specialize in wildlife photography and could really care less about shooting the landscapes around them. That's okay with me; we all have our particular interests. Personally, I like to shoot a lot of subjects, but wildlife is always high on my list. The tricks to capturing wildlife images are getting to where the wildlife is, knowing techniques for taking photos of animals, and getting home safely without any harm done to you, the wildlife, or their habitat.

Like many nature photographers, I don't live anywhere near one of the grand national parks. As a matter of fact, I live in the city. However, traveling less than an hour in any direction usually gets me out to where the wildlife is—usually of the animal kind. I make it a habit to spend many Saturday mornings throughout the year driving to a metro park located in southeast Michigan. It's a little less than an hour from my home, which is much closer to the city than the average nature photographer would like, but there is an abundance of wildlife living in their natural habitat, and I never know what I'll come across from Saturday to Saturday. I often come across deer, ducks, and swans (and an occasional wild turkey, like the one that once tried to attack me—honest!).

Figure 5.1 Travel as far as your backyard and you'll be surprised at the wildlife that surrounds you.

Getting to Where the Wildlife Is

Whether you live out in the country or in the city, you probably don't have to travel far to take photos of wildlife. Sometimes I don't have to travel any farther than my backyard, which, by the way, has offered me plenty of wildlife and nature opportunities for photographs over the years, like the hawk shown in Figure 5.1. All I have to do is take a seat on the patio, have my digital SLR ready with a long telephoto lens attached, have my cup of coffee and maybe a newspaper, and the wildlife actually comes to me. It's

my spring, summer, and autumn ritual. Even though I live close to the city, a few times a year I see a herd of deer taking a stroll across my property—but that's rare, and I haven't caught any on camera yet.

Late summer or early autumn in the Midwest is a good time to hang around flowerbeds; that's when the butterflies start feeding on blooming butterfly bushes, which are conveniently planted 10 feet from my patio. I can spend hours just taking photographs of butterflies like the ones shown in Figure 5.2, all without having to travel. Now, you might be asking what butterflies have to do with shooting wildlife, but remember, butterflies may not be wild buffalo, graceful deer, or roaring lions, but they are classified in the animal kingdom, even if they are small and don't bite (at least I don't think they bite…).

Figure 5.2 In most regions butterflies are in abundance only at certain times of the year. Doing a little homework and knowing their habits gives you a better chance for some good shooting opportunities.

Finding the Spots

We can't spend the rest of our lives taking nature photos in our backyards, but it's a start. If you're like me, you want to get out to the forest, mountains, jungle, plains, or even the ocean to capture photos of wildlife. We all have our own habits for doing this, like my Saturday morning sessions at the park outside of the city or my yearly travels to Michigan's Upper Peninsula, but to get a more varied flavor of wildlife opportunities, keep the following ideas in mind.

- **Keep an open mind.** If you're venturing out to take photos of lizards in the desert, but instead you come across some interesting rattlesnakes, go for it! Just don't stick your hands in any holes. (I learned that while traveling out West.) In other words, you might be planning to shoot deer in a forest, but if instead you come across a family of ducks that look pretty cute in the nearby lake, take the time to photograph the duckies!
- **Choose locations carefully.** Heading out for a day of shooting wildlife does take a little planning and common sense. For instance, autumn is a great time for taking photos of wildlife combined with fall colors for landscapes. One thing you'll want to keep in mind is to avoid venturing out during hunting season! In many areas, deer hunting begins November first. I'd avoid venturing out for your photography at that time. It's not a good idea to mix beer, shotguns, bows and arrows, and nature photographers in the same region.

  When choosing spots to do your nature and wildlife photography, do your homework on the location. It's never a good idea to trespass on private property. Think about venturing into state and national parks that are known for their abundance of wildlife. Wildlife refuges can be found across North America; these are great places for shooting wildlife. I've traveled to the Seney National Wildlife Refuge a few times—it's in the middle of Michigan's Upper Peninsula and offers a wide range of wildlife to photograph. Trails are well marked in refuges and parks, and their nature centers often offer guided tours or information on venturing out on your own, providing you with information about the best spots to find wildlife. Stop by the information/nature center, and you'll often find the park staff more than willing to give you tips on the best times and locations for shooting.

- **Understand your subject matter.** Taking photos of birds is different than stalking bears for photo opportunities. Birding is a science all on its own, and successful bird photographers know their subjects and often are as educated as the best birders. A good bird photographer will know the species common in a particular region, their yearly migration habits, and the best part of the day to locate and photograph the birds. Other wildlife photographers might be well versed in the behavior of different species of bears, their habitats, and how to approach (or not to approach) their subjects. Before venturing out to photograph a particular type of wildlife, do your homework and study your subject. You'll have better photo opportunities, and you'll be safer for it.

  Different types of animals have different reactions when humans are around. I like to photograph deer and I know that deer behave differently toward humans depending on their immediate environment. When I see a herd strolling through my yard, I know I can't allow them to see or even *smell* me, or they'll run like the wind. If I drive 45 minutes to the metro park, the deer in certain parts of the park are much more relaxed around humans (see Figure 5.3) because they have had more exposure to people in their environment. It makes a huge difference; in one part of the area I can basically walk within six feet of a deer, whereas in other places I can't be within a quarter mile without scaring the deer away.

Figure 5.3 Deer will behave differently from one location to another, depending on their exposure to humans. If they are used to seeing people in their environment, they might let you get a little closer.

- **Protect yourself.** I've already mentioned the importance of keeping safety in mind when you're venturing out in the outdoors alone. The obvious precaution you can take is to never venture out into remote areas alone. But that's not always possible, so when you're planning to go out to remote areas for wildlife shooting, the same safety rules apply. Don't venture out without letting someone know where you are going, the time you'll be arriving, and the time you're expected back. Carry a cell phone with you, but if you're going to remote areas without cell coverage, consider investing in a satellite or analog cell phone that might extend your coverage. Always educate yourself about the indigenous species in the area you're venturing to. You might be going out to take photos of bunnies, but you need to be aware of the bears, alligators, tarantulas, scorpions, or snakes that might also live in the area.
- **Protect the environment.** In addition to protecting yourself, be mindful of the environment you are visiting. If you're camping out, don't leave food lying around the campsite. Make sure any campfires are properly ignited and properly extinguished. Check the guidelines in the various state and national parks you're visiting as well; each may have a separate specific set of rules. Most important, respect the environment the wildlife is living in—you don't want to disturb any of the natural habitat. As a rule of thumb, leave the area as pristine as you found it.

Composition and Camera Settings for Wildlife Photos

As with landscape photography, I suggest you follow a rigid workflow when you go out in the field to shoot wildlife photos. Most of the rules are going to be the same, but shooting wildlife poses specific situations you need to address. Landscapes don't breathe, run, or get mad when you get near their young. Depending on how serious you are about photographing wildlife in the field, you might want to concentrate on learning patterns of animal behavior, such as birds or deer if they are your primary subjects, and then approach the field with those patterns in mind.

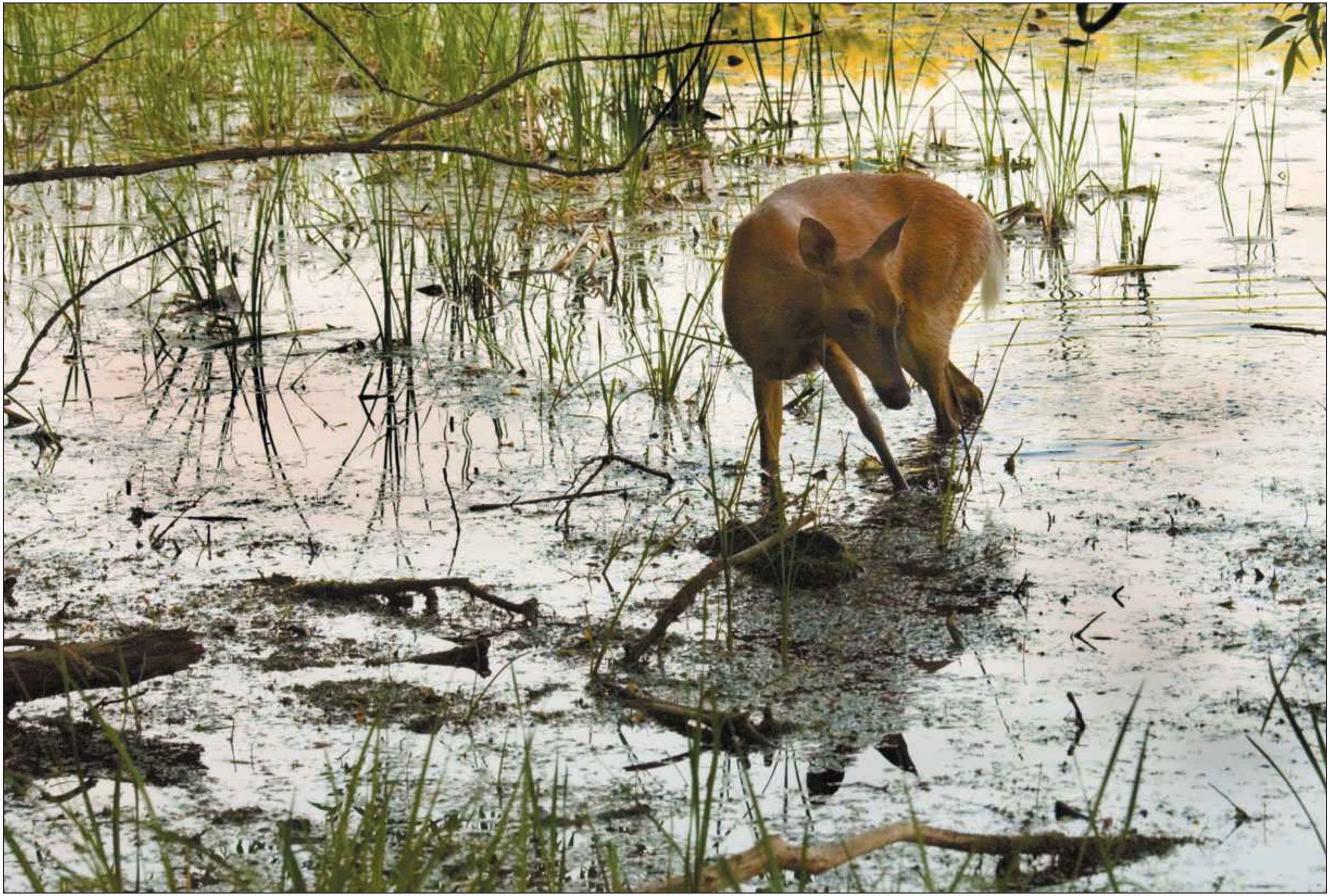
As a rule of thumb, follow a workflow. The following step-by-step process for taking wildlife photos will give you some good guidelines.

1. **Be ready.** I learned a trick from friend and professional wildlife/photo tour leader John Baker: Leave your digital camera in action mode in case you come across wildlife while traveling. If you come across some critters—large or small—you can easily grab your camera, turn it on, and begin shooting. When your digital camera is in action mode, it will automatically adjust itself for a fast shutter speed and change the focus mode to allow you to track moving targets—a perfect combination for photographing wildlife.

If you recall my story of the occasional herd of deer that like to trespass on my lawn, I'm always at the ready. I keep a digital camera nearby in the house at all times, set to action mode, just in case one of us in the house spots these graceful creatures strolling outside.

2. **Evaluate the subject.** It's often difficult to anticipate what wildlife will do next, and some species are easier to photograph than others. Deer will often run like the wind if you get too close, but horses grazing in the wild, like the one shown in Figure 5.4, could care less what's going on around them. It gives you more time to evaluate the scene and frame your shot.

Figure 5.4 Some wildlife subjects cooperate well and even let you take the time to compose shots of them properly.



One common mistake I see a lot of photographers make is centering their subject in the frame. If you're shooting in action mode, you might be faced with keeping the focus point of your camera on-center, which does lend itself to centered action shots. I get around that problem when shooting wildlife by zooming out a bit more than I usually would, and then cropping later in Photoshop so my subject matter isn't perfectly centered.

3. **Place your digital camera on your tripod.** This might be tough to do for some forms of wildlife, such as birds, but your rule of thumb is still to shoot as many wildlife photos as you can on a tripod. Consider investing in a good ball head for your tripod; it will allow for more freedom of movement while panning animal movements. As a reminder, always use a sturdy tripod for your nature and landscape photos. Your portfolio will include sharper photos!
4. **Compose the scene.** The next step is to carefully compose the scene the best you can in your viewfinder (if you're shooting with a digital SLR) or your LCD. When shooting wildlife, you will have many situations in which your subjects are on the move. Again, in those cases, you might be lucky just to keep the images centered in the frame. Though it's not a great habit to get into, you can always crop in Photoshop later. Keep in mind that when you're shooting photos outdoors, it can be difficult to view the scene. When you're shooting stationary wildlife—the ones that aren't in a hurry, like the horse in Figure 5.4—you'll have ample time to compose your photo so you can avoid cropping later.
5. **Implement the 360-degree rule.** This quick step is a reminder that when you're out in the field composing photos, you should remember to implement the 360-degree rule. Turn yourself around in a full circle and look all around for other photo opportunities. Even if you're concentrating on a flock of geese or a distant deer, take a look around in all directions in your immediate vicinity, just to see whether there are other photo opportunities you might not have noticed.
6. **Choose the shooting mode.** Most digital cameras offer a number of different shooting modes for you to use. Nature photographers typically use aperture priority mode, which allows you to choose the aperture setting for the photo while the digital camera chooses the shutter speed for that aperture setting based on its internal light meter setting. For shooting wildlife, it's not that cut and dried, though. The wildlife photographer has to take into account movement by the subject and often has to increase ISO (see the following step) or use a wider aperture setting in order to get enough of a shutter speed to freeze the action.

7. **Set the ISO.** As a rule of thumb, when I'm shooting wildlife I turn up the ISO setting to around 400. This increases my shutter speed while leaving the chosen aperture setting as is. Be careful using ISO settings above 400, because this is when image noise starts to become an issue on many digital camera models.

8. **Set the white balance.** Just like when you're shooting any other subject, try using your auto white-balance setting. If you're getting color tints that don't look kosher, try a manual white-balance setting that best matches the given lighting conditions.

9. **Focus.** Back in the film days, I used manual focus for most of my photos. Age takes a toll on eyesight, and I've taken to depending on auto focus for most of my shots. I've actually found that on today's digital cameras auto focus is quite accurate, and I rarely have to shoot in manual focus mode.

   When focusing on wildlife, I use the same rule that I use for my portraits of people—focus on the eyes! Wildlife is no different than people when it comes to photographs; you'll find that the best wildlife photos you take are where the eyes are the center of attention in the photo, and you want that part of the subject focused perfectly, like the distinguished old pooch shown in Figure 5.5.

Figure 5.5 Whether you're photographing people or animals, their eyes are the windows to their souls—and the absolute key to great photographs.

10. **Review the image.** After you take a photo, review the image on your digital camera's LCD. Check the preview in the LCD for sharpness first by using the digital camera's image-viewing zoom feature. Look at the image for composition, depth of field (aperture), white balance, and exposure using the digital camera's histogram feature.

11. **Take more photos.** After you review your photo, make any necessary adjustments, such as adjusting your focus, aperture, shutter speed, zoom, or even your composition, and reshoot your photo. If you were pleased with the results, recompose the image for the other orientation—landscape or portrait.

Go on a Wildlife and Nature Photo Tour

Getting photos like the ones shown in Figure 5.6 just doesn't happen by accident. If you're new to photographing wildlife, I highly suggest going on a trip with an expert. John Baker is a longtime nature photographer who leads photo excursions all over the world. Many times a year, John leads photo tours for small groups, getting to where the wildlife is, as well as guiding you to the grand vistas of their environment. I've had the pleasure of joining John on one of his tours, and I highly recommend the experience to you. You can look up John's latest tour schedule by visiting his Web site at http://www.travelimages.com.

Figure 5.6 If you're new to shooting wildlife and you want to have a great nature photography experience, consider booking yourself on a photo tour. Photos courtesy of John Baker. © John Baker, 2006.

© John Baker, 2006

Advantages to traveling with an experienced leader include

- **Better production.** Let's face it, if you travel on your own and you're not familiar with the area, you can spend a lot of time just learning the land. An experienced tour guide will save you a *lot of time*. They know where to go and when to get there. What that means for you is greater productivity. Instead of spending half your trip wandering around and scoping out areas of interest, with an experienced guide you'll get to more places than you could ever plan on—and a lot faster!
- **Safety in numbers.** When you're on a tour with other photographers, you're not alone! You'll often travel in groups and be guided along the way as well. It's much safer that way, and a lot more fun. What could be better than traveling and shooting wildlife photos with other photographers?
- **More economical.** If you were to plan on a one- or two-week trip to the national parks to shoot landscapes and wildlife, it could cost a small fortune. I've found it more economical to book a trip that's already planned and take advantage of the group fares that are available.

Summary

Photographing wildlife is a lot different than just shooting landscapes. Wildlife, by nature (no pun intended), tends to move around a little more and some have sharp teeth. All kidding aside, wildlife photographers quickly learn that their craft is as specialized as a portrait photographer's, but that it requires the skill of a sports photographer.

I can't stress enough the importance of knowing the behavior of the wildlife subjects you are photographing—each has its own unique characteristics and presents its own safety concerns. Like I've mentioned, for those who are not full time wildlife photographers, I highly recommend traveling with an experienced guide and booking yourself on a photo tour. It will be the best thing you've ever done. You'll be safer, you'll be in the great company of an experienced guide and other photographers, and you'll be much more productive in the time you are traveling. Trust me, you'll get many more quality photos this way than traveling to areas with which you're not familiar, and it will probably save you money as well.

6

Abstracts of Nature

If you want to be a little different than the typical nature photographer, you need to shoot things differently sometimes, with your final product, the print, in mind. For many years I photographed classic scenes, mostly landscape photos. I was proud of a lot of my work, but after years of shooting waterfalls and forests, sunrises and sunsets, my tastes changed. While I still shoot a lot of traditional nature photos, I've added something different to my portfolio—abstracts.

Abstracts are photos that represent an object or scene in a totally different way, almost like creating a totally different representation of what the object actually is. It could be an extreme macro of a portion of a flower, leaf, or insect that is distorted using Photoshop to a point where you can't immediately tell what the heck it is, but the image is pleasing, like in the photo in Figure 6.1. It could be a manipulated section of leaves that you photographed while using a slow shutter speed and actually panning the camera while the shutter was open. The point I'm trying to make is that abstracts are what you conceive them to be. You can photograph abstracts right out of your digital camera or manipulate the images later in Photoshop.

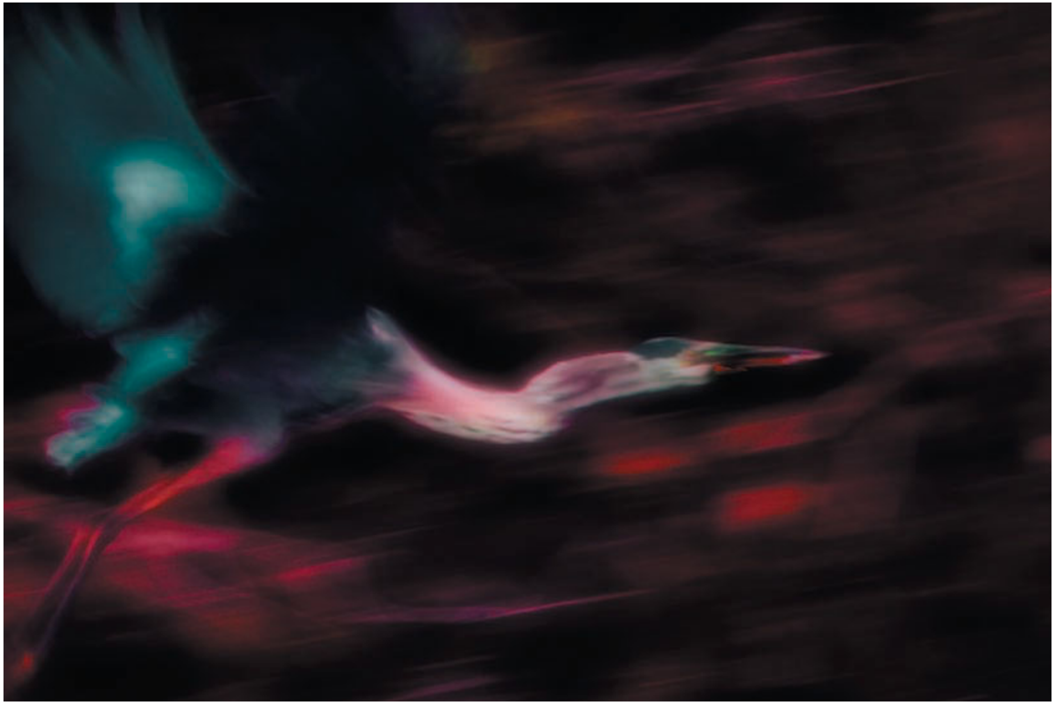


Figure 6.1 Abstracts are alternative representations of what a composition actually is.

Abstracts aren't for everybody's taste; after all, art is appreciated on an individual basis. You might like Dali, but I might prefer Picasso (actually, I like both). The purpose of this chapter is to point out an alternative way of producing nature photographs and to open your repertoire to other artistic nature possibilities. Besides, there's a pretty good chance that you already have these gems in your portfolio; creating abstracts can be a way of rescuing lost treasures.

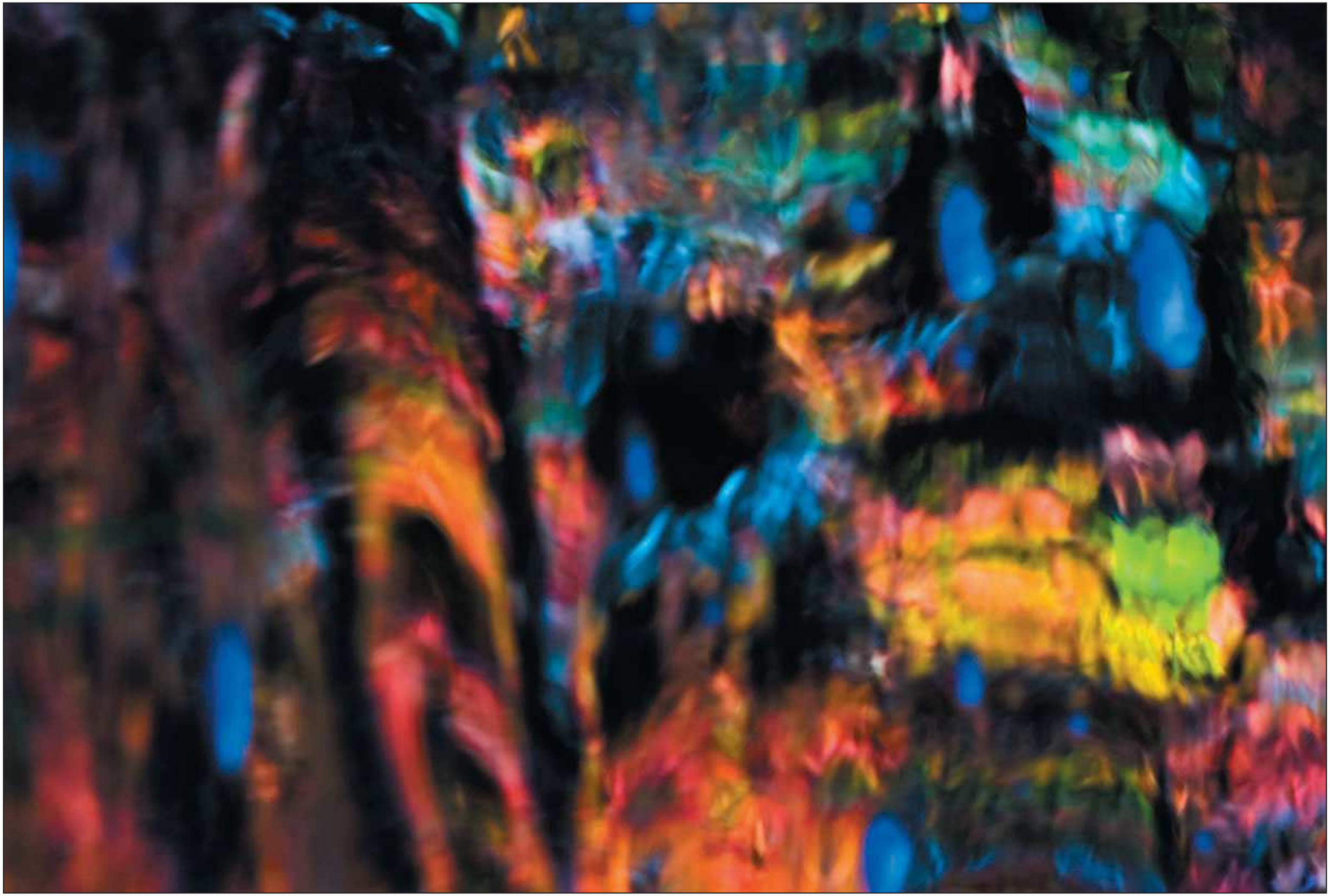
Capturing Abstract Images

Abstract nature photographs are really a difficult concept for a traditional photographer to grasp. You really have to turn your imagination loose to be able to visualize a nature subject as an abstract, photograph the subject, and then finish the work in Photoshop. It's a new way of thinking while you're shooting, and it can even be a fun exercise for a typical photo outing.

Another way to capture abstracts is to go to your image library. Honestly, most of my abstract in nature images were conceived after the fact. I would be out in the forest capturing fall color for days, and when I was reviewing images later on my computer, I would pick just certain parts of a photo and then work with them in Photoshop to create my abstract. Similarly, I could be out shooting mountain ranges or high-desert scenes, using traditional photographic techniques. The photos would look great later as I processed them, but I might take a few and really mess around with them using Photoshop filters and other techniques.

Rescuing Lost Treasures

Rescuing lost treasures is a description I often use to describe digging into your old folders of digital images, opening ordinary nature images, and them turning them into abstract works of art. I make it a habit to not delete digital images just for this reason. I know a lot of photographers who will go out and take 200 images on a photo outing, and then delete a good percentage of them when they download them and view them on their computer. After all, why save the duds and take up disk space?



My approach is to archive everything I capture. I often go back weeks, months, or even a few years later to view a batch of original images, and then I start messing around with the images in Photoshop. I might do some extreme cropping, blurring, or adding color (sometimes outrageously), and then I might apply some filters. Often, I come out with an artistic piece like the one shown in Figure 6.2. The point is, don't chuck ordinary images you wouldn't normally add to your nature portfolio. You can always rescue these images and produce a work of art!

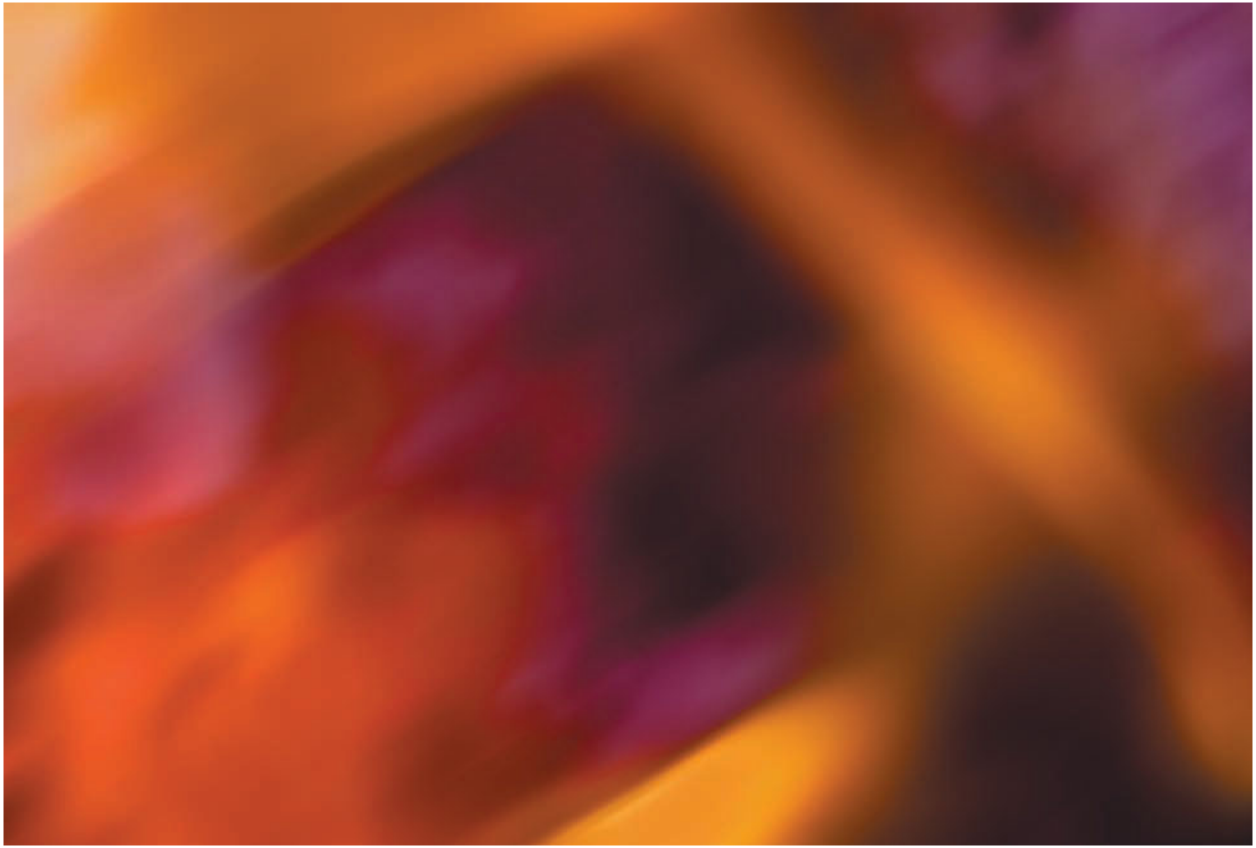


Figure 6.2 Take an ordinary photograph, such as a photo of a campfire, and then turn it into an abstract.

Choosing Abstract Subjects to Photograph

One good thing about abstracts is that you can find them in almost any nature subject. It might take a macro shot, an out-of-focus attempt, or some extreme color saturations in Photoshop to do it, but if you look hard enough and concentrate on abstract representations of your subjects, you'll be amazed at what you can find. As I mentioned earlier, you can also find abstracts in images you've already shot—just go perusing through your image library and you'll find them. It could be a simple close-up photo of part of a waterfall, like the one shown in Figure 6.3.

Original image

Enhanced in Photoshop

Figure 6.3 A zoomed-in part of a waterfall is abstract in itself. Adding color and lens effects to the same image can give it an entirely different perspective.

If you're going to venture out in the field to purposely look for abstracts, keep these tips in mind:

- **Look for portions of a scene that are already abstract.** You might be out taking nature photos of a sunrise or sunset. Look for color in portions of the clouds. If you have a long enough zoom, try zooming in on just that portion of the sunrise or sunset. It could be an image you can use later to knock the socks off people you show it to. On the same note, you could be taking photos of reflections of foliage in a river. Again, look for something in the reflection and zoom in on it, like in the example shown in Figure 6.4.
- **Look for color in your subjects.** You might find that color is the key to abstract images. Your photos don't need a lot of different or complex colors like the one shown in Figure 6.4; they could have simple colors. The key is, make color the main part of your subject matter.
- **Don't delete those blurred photos.** As shown on the next page, you can rescue those blurred photos. Don't delete them when you view your images on your LCD when you're out shooting. A little cropping combined with some interesting color saturation can give you an image you never thought you'd have!

Figure 6.4 Simply zooming in on just a portion of a scene can turn an ordinary photo into an abstract.

- **Look for patterns in nature.** Some of the best abstracts come from identifying patterns found in nature and exploiting those patterns for abstract photos. By changing the way you compose an image in your viewfinder or on your LCD, you can turn a good landscape into an even better abstract, like the photo of the Mexican Hat area of southern Utah shown in Figure 6.5.

Figure 6.5 Simple patterns in nature make great abstracts—the simpler the better.

Summary

Abstracts are basically what you make of them. You might run into some art lovers who will argue what is an abstract and what isn't, but to us, their opinion doesn't matter. Just that fact that you'll get an occasional argument makes it worth the effort.

You can find abstracts in many of the areas you're photographing; you just have to look for them. I try to first look for patterns, and I almost always look for color I can capitalize on. If your digital camera has a macro mode or if you have a macro lens for your digital SLR, take advantage of it to get close-ups of flowers, leaves, or rocks. Close-ups make for great abstracts, and with a little finesse in Photoshop, you can really draw a lot of interest in your photographs.

Last, I highly recommend viewing some of those oldy-moldy images you never paid attention to in the past. Blurry images can make for some great abstracts if you're in the mood to be creative, so hopefully you've saved some of those. Taking time to create abstracts from old images is a worthwhile exercise, and I'm sure you'll produce images you never knew you had. You might even impress some of those artsy types!

7

Close-Ups and Macros in Nature

In the previous chapter, I showed you how you can fairly easily produce abstracts from nature scenes that you're shooting and how you can rescue other images from lost archives to create artistic images. Another alternative method to capture nature and produce provocative images is to either zoom in on subjects or shoot macros of nature.

Close-ups and macros (yes, there is a difference) are two other ways to represent objects as you see them. These methods are overlooked by many nature photographers—just go on the Internet and view a few nature photographers' portfolios, and you'll see my point. Making a conscious effort to look for close-up and macro opportunities will greatly enhance your nature photography portfolio and expand your approach to capturing images.

Figure 7.1 Getting in close is another way to represent an object. Not all nature photos need to be shot at a wide angle with a foreground and background as part of the image.

Close-Up Photography

Close-up photography can be described as capturing images up close. (Pretty simple, right?) It could be an image of a plant or a tree—the only difference is that you're zooming in on only a portion of the object instead of the entire thing. As nature photographers, we can be so regimented that we don't even look at the small area; we're always concentrating on the grand landscape. Getting in close, like in the image shown in Figure 7.1, can give you a dramatic representation of the original scene. Just expand your thought process.

You don't need any special equipment to shoot close-ups, just a tripod, a good digital camera, and a good lens. The simple workflow I use to shoot close-ups includes the following steps.

1. **Implement the 360-degree rule.** As you might recall, I suggest you always take a moment at each location in which you're shooting nature photos and turn your body around 360 degrees, carefully looking at everything far and wide, as well as looking down for something small. You might be at a location to shoot a mountain range, but if you just take the time, you might find a plant, desert flower, or tree that gives you some interesting close-up or macro opportunities.

   Keep an open mind and always take advantage of all interesting objects in a given area. Your portfolio of nature subjects will thank you for it! It's hard to break old habits, and all of us have a tendency to look for the grand subjects, but looking around for the small stuff can increase your sphere of objects to photograph.
2. **Place your digital camera on a tripod.** When you are getting close to subjects, a tripod is a must, even though you might be shooting an object at a faster shutter speed. For close-ups you need to get in close, and often it will be a lot easier to hand-hold your camera to get the shot. Try to get into the habit of taking an extra 30 seconds to properly set up your digital camera on a tripod. The overall quality of your close-ups will improve!
3. **Use a self-timer or remote shutter release.** When you're getting in close, it's important to ensure your images are the sharpest and best quality they can be. Normally, if you shoot your photos by pressing the shutter, you're introducing vibration to the camera, which often results in blurred images. Using a tripod and then using the self-timer or remote shutter release on your digital camera will help reduce the vibration.

4. **Change your composition.** Don't rush your shooting, but do take your close-ups at different angles, change the lighting, and vary your focus. You can change focus by shooting wide open, adjusting your aperture to a larger setting, thus reducing the depth of field. On the other hand, you can close down (also referred to as *stopping down*) your aperture, allowing for a more focused foreground and background. Additionally, try to capture different aspects of the subject by zooming in and then zooming out, like I did with the ear of corn in Figure 7.2.
5. **Review your images.** Don't forget to take the time to review your images as you're shooting them. Look for proper white balance, focus, and exposure. Make any necessary corrections, and then take more photos!

Figure 7.2 When taking your close-ups, zoom in and out and take several photos. You'll get more usable images in the long run.

Digital Macro Photography

Digital cameras have given us the ability to shoot objects from very close up—this is called a *macro*. Film cameras didn't give you this ability unless you had a special lens attached, a macro lens. Many digital cameras with built-in lenses give you excellent macro capabilities with results that, as far as I'm concerned, outperform their old film-camera counterparts.

You can create a macro when you have the ability to produce high enough magnification to fill an entire digital sensor frame with a close-up object. The magnification results are rated by a 1:1 ratio, or "real-life size" proportion, to the image sensor. For instance, if you photograph a leaf with an actual size of 20mm measured horizontally, that same section of the leaf will fill up the image sensor with an approximate 20mm size.

Since I've been using digital cameras, I find the best results don't come from my expensive digital SLR equipment with those big expensive lenses. My best macros come from my compact, all-in-one digital cameras, such as my little Nikon Coolpix 7900, pictured in Figure 7.3. The little guy fits in my pocket and allows me to take great photos for a carry-around camera. I keep it with me to shoot macros of flowers, which I do quite often. Additionally, I take it out in the field with me, just in case I come across any objects I want to capture macros of. I always take my macros with the camera mounted on a tripod, as shown in Figure 7.4, using the digital camera's self-timer.

Figure 7.3 My little pocket-sized Nikon Coolpix 7900 gives me better macro results than all the other digital or film equipment I've ever used.

Figure 7.4 It's easy to get lazy and hand-hold macro shots—as a matter of fact, a tripod is almost a must for macro shots because you need to keep the camera vibration- and movement-free for the sharpest results, especially when you are shooting at a low ISO setting of 50 or 80.

With digital cameras with sensors smaller than 35mm film and lenses that are 3 (three times zoom multipliers) or 4 , you can understand how many compact digital cameras can have excellent macro capabilities. Many of these compact digital cameras also come equipped with macro mode, which adjusts the auto focus to allow you to focus on subjects as close as less than one inch from the lens, enabling you to get results like the macro of the flower in Figure 7.5.

If you're using a digital SLR, there are many accessory lenses you can purchase that can give you up to 1:1 magnification, which will fill a digital camera sensor with your subject. You can also look into extension tubes (optical add-ons for normal SLR lenses). An additional and economical accessory is a close-up filter, which attaches directly to your lens filter thread. Canon, Nikon, and other popular filter and lens manufacturers offer these options to help you get close up to your little subjects.

Figure 7.5 Macro mode allows you to focus on subjects almost as close as the lens, sometimes within an inch.

Close-Ups and Macros in the Studio or the Home

I live in a region of the country where we get three or four months of gray, cold, wet, snowy weather. Every few weeks we'll get a really cool snowstorm, and when it's finished snowing, you can get some great winter shots. The rest of the time, we're stuck with lousy Midwest weather. What a great time for some studio shots of flowers!

Don't let the yuck times during the year make you forget you have a digital camera. You have a home (or, if you're lucky, a studio), a tripod, a digital camera, maybe some flash or flood lights. Put them to use with your creativity. Take an afternoon and set up your studio for some close-up and macro shots of flowers or plants.

Try to keep your setup simple and use some of these tips for indoor shooting of flowers, plants, or anything else interesting.

- **Use natural light.** I've found that the natural light that pours in from windows can make for a great light source, especially on days when it's cloudy. The light on those days is nice and even and diffused. Take advantage of nature's light box.
- **Use a flash.** I use a wireless flash system with my digital SLR for a lot of still life shots and sometimes even flowers. If you have an external flash, or even a few, try tabletop setups where you can illuminate your subject from different angles so you can get some even lighting while reducing shadows.
- **Use a daylight-balanced light source.** If natural light isn't going to cut it or if you don't have strobes at your disposal, you can still build yourself a great lighting setup cheaply. If you visit your typical "big-box" home store, you'll find that they carry those new daylight-balanced fluorescent screw-in light bulbs. These bulbs last forever and are set at 5000 degrees Kelvin, which is pretty close to daylight. With some inexpensive reflectors, you can build yourself a pretty good indoor lighting setup.
- **Use a backdrop.** For dramatic shots of flowers and plants, consider using a colored backdrop. I prefer black as a backdrop for colorful flora because it adds a dramatic effect to my images. A cloth or large sheets of paper will often do the trick.

- **Make color part of your subject matter.** When shooting flowers, I always pick a species that gives me dramatic color. I like color! When contrasted against a dark background, your close-ups and macros will appear to jump out, giving you that wow factor when you show your work. Figure 7.6 shows some examples of flowers photographed using simple materials found around the home, such as natural light and a dark background.

Figure 7.6 You can easily put together a studio setup to photograph flowers on those days when you'd rather not venture outdoors. Nature photography doesn't always have to take place outside!

Summary

Close-up and macro opportunities are often overlooked as we search for images of a grander nature. To broaden your horizons, make shooting close-ups and macros a part of your everyday work. Even if you travel halfway around the world to shoot nature and grand landscapes, pay attention to the local flora. Chances are, you'll see a whole new world you've never seen or photographed before.

8

Using Bridge to Manage Your Nature Images

Managing hundreds or thousands of digital images on your computer is no easy task. On any particular day out shooting nature photos, I can come home with easily 500 images, especially if I've been bracketing my shots. In any given year, I can shoot between 10,000 and 20,000 images. Even if you shoot a lot fewer images than that, managing all those files can be a task. If you don't have a good system to manage them, anarchy will arise!

Because I use Photoshop as my image editor, I use Bridge as my file-management application. Why not? Bridge comes standard with all Adobe CS2 applications and it's the best tool for the job. You can think of Bridge as your digital "light table," an image file system with a whole lot of bells and whistles to boot. I can use Bridge for almost all of my image management, including viewing my images on my virtual light table—the computer monitor. Bridge is an upgrade to the File Browser we came to love in previous versions of Photoshop. It's now a standalone application that can be launched independent of the Creative Suite programs or from within Photoshop. Bridge provides better integration between the Creative Suite programs, but if you only use Photoshop CS2, it works great as your standalone or integrated program to organize, browse, and locate photos. Bridge also serves as the launching point to process raw images in Camera Raw, which I'll cover in Chapter 9, "Using Camera Raw."

Before diving into Bridge, you need to think about file management. You're probably currently downloading images to a variety of places on your computer, such as the My Pictures folder or other folders you've created. Consider coming up with a plan, a system of file management where your images can be stored that will closely resemble your own image editing workflow.

Creating a File Management System

As a nature photographer out in the field shooting great photos, you'll be eager to get back to your computer so you can mess around with your shots. After downloading your images, you'll be excited to open Bridge, view the images you've just taken, and then process the best of the litter. The next thing you know, you'll have run the nature images through Photoshop, made a few prints, and then moved on to something else, such as cruising the Web to do some shopping for more digital camera gear! The downloaded images will then sit in their folders, maybe soon to be forgotten.

If you've been using a digital camera for a while now and you take thousands of nature and landscape photos like I do, you've probably noticed how quickly images pile up on your hard drive. Every time you download photos from a memory card to your hard drive, you could be adding hundreds of digital images to an already

crowded storage space, one gigabyte at a time. They then sit there, pile up, reduce the amount of available disk space, and maybe even get lost or forgotten.

Whether I'm shooting nature images in the field, downloading pictures, organizing files, or working with images in Photoshop, I have a workflow for everything. As a review, a workflow is a step-by-step progression of actions you take on a consistent basis to ensure that proper techniques are consistent from shooting a photo to creating the final print. An image-management workflow will work equally well when you're managing those hordes of images I've been warning you about. By spending a few minutes planning your file management approach, and then by following your workflow, you'll be much better organized, more productive, and saner. And best of all, it doesn't cost you anything!

Creating a file-management system starts with two simple tasks:

- **Plan how to organize and store your images.** All photographers have different needs. Make a plan—the simpler the better—to organize all of your images, not just your nature stuff. If you're like me, you'll have nature images divided between wildlife photos, landscapes, macros, and maybe even abstracts. Like many nature photographers, you might also have images of family, friends, or even some commercial clients for whom you shoot images. You need a plan of organization to keep all of those images straight.

  For your nature photos, you might want to separate images into categories, such as plants, animals, flowers, or geography. You can also divide up your images by region, such as the Midwest, Southwest, or even the Antarctic region. (I hear it's cold there this time of year—well, any time of year!)
- **Create folders to store categorized images.** Whether you're using a Windows PC or a Mac, first create a master folder to contain all your original, working, and final output images. (I call my master folder Digital Images, but you can name yours anything you want.) The next step is to create subfolders within your main images folder to classify each major step of your workflow.

  With the thousands of shots I shoot each year, I try to keep it simple. I set up a master folder called Digital Images. Within that folder, I set up folders for all my original images, working images, and finally output images. Figure 8.1 shows my basic folder structure.
- **Back up all of your images in one step.** When all of your images are contained in one folder (that contains all of your subfolders), backing up to a CD, DVD, or external hard disk or file server becomes a lot easier.

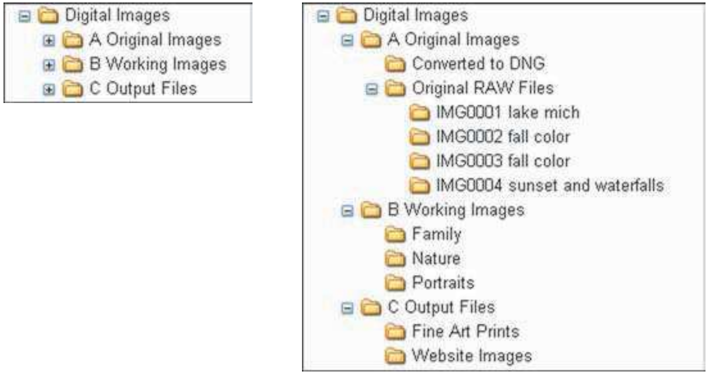


Figure 8.1 All you need is one folder to hold your original, working, and output folders. Backing up all of your images will be easier when they are all held in one folder.

Simple Steps to Managing Files

Now that you've thought about your strategy for how you are going to store and back up your image files, consider following a simple workflow for your everyday work. The following steps might not exactly match how you approach your work, but you can use them as an example of an image-management workflow.

1. **Make a backup in the field.** I haven't spoken of this in detail, but if you're out on an extended field-shooting expedition, consider carrying a portable storage device, such as the Epson P-4000 or even an Apple iPod. These devices are small and battery-powered, and they can also play music and audio books! In the case of the iPod, you can also watch downloaded TV shows and the like, if you're into that sort of thing! (I'm getting acquainted with my new iPod 60-gig model. See you in six months!) Getting back to digital images, I recommend making backups of your memory cards if you're away from a computer. Memory cards can easily be lost or damaged in the field, and one more line of defense doesn't hurt.

   An additional piece of advice I have for when you're using a portable storage unit in the field is, don't be comfortable enough to reformat your memory cards after you've downloaded the images to your iPod or other portable device. These devices can fail or get lost too! I only recommend using these devices for backup purposes (and on a temporary basis, at that) until you get your memory cards downloaded to your computer.

You might think this step is a little excessive, but I've heard horror stories. Recently, a friend of mine lost most of his shots when he misplaced a 2-gig memory card on an airplane on a trip back to the U.S. from eight days of shooting in England. He wasn't a pro, but most of his shots, including those of Stonehenge, London, Avebury, and Wales were lost.

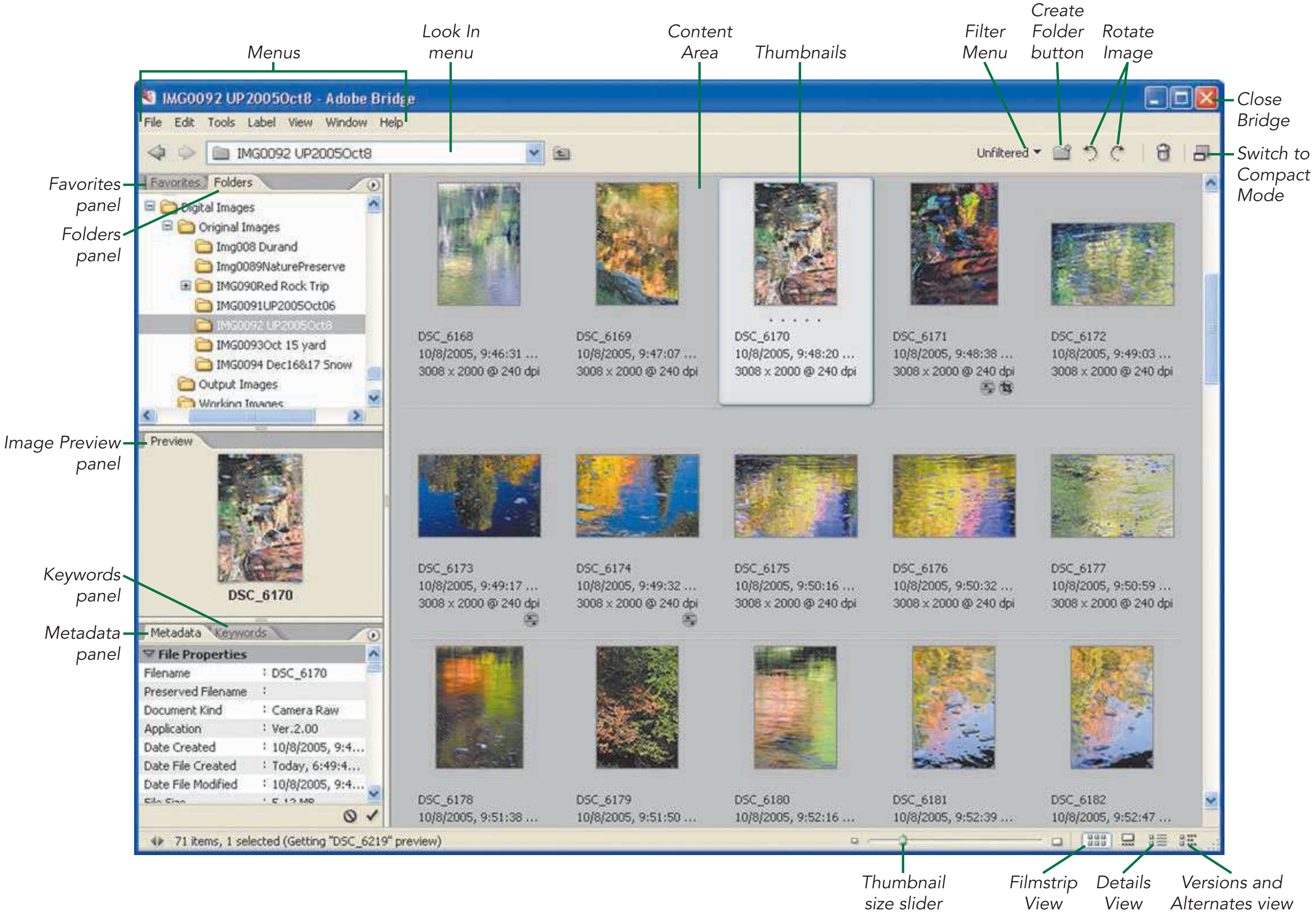
2. **Download your memory cards to your computer.** The first thing I do when I get back to my hotel room, my office, or my home after a day of shooting is immediately download my images to my computer. I create a subfolder in my Original Images folder, usually named in sequential order with a date and a descriptive name for the images taken that day, such as IMG0041 May 30 England, IMG0042 May 31 England, and so on.

3. **Back up your images to DVD, CD, and/or a backup hard disk.** Right after downloading my images to my Original Images folder, I back up to DVD—twice! A DVD holds more than 4.5 gigabytes of data, or more than four 1-gig CompactFlash or SD cards full of images. I often go through at least four or five cards when shooting nature photos all day; raw images are quite large. One DVD usually holds 500 or 600 images, depending on the size of the files you are capturing. I make two copies of my DVDs, one to keep onsite in my image library and one to keep offsite in my safety deposit box.

   You can purchase blank CDs or DVDs inexpensively now, and great bargains are available at your local computer and office supply stores. Whether you're using CDs or DVDs to archive your images, be aware that optical discs are not all alike. CDs and DVDs, like many things, are available in different levels of quality.

   There are some cheap discs on the market, but they might be cheap for a reason. They might scratch easily or they might be susceptible to quicker chemical deterioration than other discs. When buying blank CDs or DVDs to archive your images, buy name-brand premium discs, such as Delkin Archival Gold or Verbatim DataLife. These discs are supposed to hold up for many years, even decades if they're carefully handled and stored.

   Backing up twice to optical disc might seem a bit extreme, but your original images are like your original negatives—if they get lost or destroyed, you always have an extra copy offsite as a last resort. I learned this the hard way 28 years ago, when all of my negatives were destroyed in a fire. All of my high school and college photographic work was wiped off the face of the earth in one night. Luckily nobody was hurt, but my negatives were destroyed.


Menus
Look In menu
Content Area
Thumbnails
Filter Menu
Create Folder button
Rotate Image
Close Bridge
Switch to Compact Mode
Favorites panel
Folders panel
Image Preview panel
Keywords panel
Metadata panel
Thumbnail size slider
Filmstrip View
Details View
Versions and Alternates view
IMG0092 UP2005Oct8 - Adobe Bridge
File Edit Tools Label View Window Help
Unfiltered
Favorites Folders
Digital Images
Original Images
Img008 Durand
Img0089NaturePreserve
IMG090Red Rock Trip
IMG0091UP2005Oct06
IMG0092 UP2005Oct8
IMG0093Oct 15 yard
IMG0094 Dec16&17 Snow
Output Images
Preview
DSC_6170
Metadata Keywords
File Properties
Filename : DSC_6170
Preserved Filename :
Document Kind : Camera Raw
Application : Ver.2.00
Date Created : 10/8/2005, 9:4...
Date File Created : Today, 6:49:4...
Date File Modified : 10/8/2005, 9:4...
71 items, 1 selected (Getting "DSC_6219" preview)

4. **Back up your hard disk.** In addition to backing up my original images to DVD or CD, I also back up my Digital Images folder to an external hard disk every night. You can never have enough backups of your important image files and documents. As my technical editor tells me, "There are two kinds of people—those who have lost data and those who will…."

   If you don't have an external hard disk to make nightly backups of your data files—not just your images, but all of your other personal work—I recommend getting one. You can purchase external hard disk drives with capacities of more than 300 gigabytes for less than the cost of a couple of memory cards. For a couple hundred bucks, you can rest easy knowing that your valuable data is protected in case your computer's hard disk fails.

5. **Use Bridge as your image-management system.** The next step in the image-management workflow is to work with your images using Bridge. I know you were probably wondering when we would get to that subject, so here we go!

Managing Images with Bridge

After you get your images to your computer and organize them in a basic folder structure, your work is just beginning. Bridge is a standalone application that can be started on a Windows PC or a Mac independent of Photoshop.

You can start Bridge a few different ways.

- From the Start menu in Windows or from the desktop on a Mac
- By clicking on the Go to Bridge button on the Photoshop option bar
- From Photoshop, by choosing File, Browse

You can use Bridge to perform quite a range of tasks as you organize your photos.

- **Browse your images.** Bridge is, first and foremost, a great image browser. Bridge enables you to easily navigate all the hard drives and folders on your computer for images in an intuitive graphical interface. If you're used to using Windows Explorer, you'll immediately be comfortable. Figure 8.2 shows the Folders tab as viewed in Bridge.
- **Open your images directly in Camera Raw or Photoshop.** Double-clicking raw-image thumbnails in Bridge will automatically open the images in Camera Raw. If the image selected is in another file format (such as JPEG, TIFF, or PSD), the image will be loaded directly into Photoshop. It's a lot easier to double-click a thumbnail than it is to use the normal File, Open route to open files.

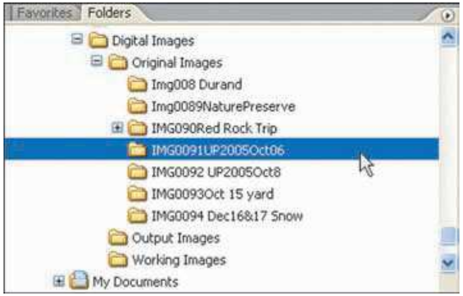


Figure 8.2 Bridge provides an interface similar to Windows Explorer so you can browse through folders.

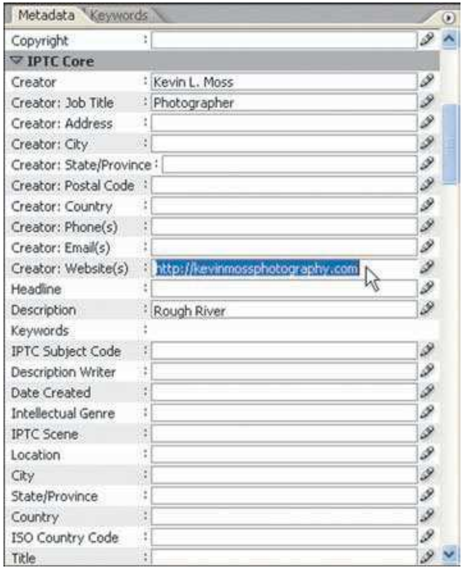


Figure 8.3 You can add file descriptions in the Metadata tab.

- **Add metadata to your images.** For most of my work, one of the first things I do when I'm viewing newly downloaded images is add metadata to each image. *Metadata* is information about the images that will help further organize the files. Your digital camera provides some metadata, such as the date the image was taken, as well as the camera's shutter speed, aperture, and ISO settings. You can add more metadata in Bridge, such as copyright information or a text description of the photo, by entering that information in the Metadata tab, as shown in Figure 8.3.

  Metadata is stored in a sidecar file that's kept in the same folder with your images. When you are viewing thumbnails in Bridge or editing photos in Photoshop, that metadata is retained.

- **Add ratings and color labels to your images.** One nifty feature of Bridge is the ability to rate, rank, and label your images. You can indicate a rating of one to five stars for an image, and you can even apply a color code to the image. Both ratings and color labels are good tools to use in conjunction with Bridge's image search features, which allow you to filter images based on ratings and labels.
- **Batch-rename your images.** Bridge offers you the ability to rename as many images as you select, giving you the option to rename those images and then store the renamed images in a folder of your choice. This timesaving feature can let you rename, for example, a group of photos of butterflies, automatically renaming the batch of photos any way you choose, such as butterfly 001, butterfly 002, and so on. This feature comes in handy when you have a number of images you want to send to another person, such as a client or your Aunt Bea, and you don't want to use the same nondescriptive filename that your digital camera provides for the images.
- **Work in multiple workspaces.** Depending on what you're doing with your images or what your personal preferences are, you can use Bridge to switch between workspaces (different working views of Bridge). You can change workspaces easily by choosing Window, Workspace or by clicking the Workspace icons in the lower-right corner of the Bridge window. Figure 8.4 shows you examples of the different workspaces available to you in Bridge.
- **Automate functions.** Photoshop automation features can be run directly from Bridge. You can select any numbers of images and create a PDF presentation or a Web site using Photoshop's Web Photo Gallery, or you can stitch together a panorama using the Photomerge feature. I often use the powerful and timesaving Image Processor, where you can batch-convert any number of images from one format to another while choosing a separate destination folder for those files. That feature itself is worth the price of Photoshop!

With all the image-management functions that Bridge offers, it's worth taking some time to get familiar with it and make it part of your overall workflow. Working with Bridge will help you keep your digital images organized, labeled, and rated. When you are working with thousands of images, Bridge is indeed the best image-management solution available.

Just as Windows or Mac OS is the operating system for your computer, consider Bridge the operating system for your images and Photoshop.

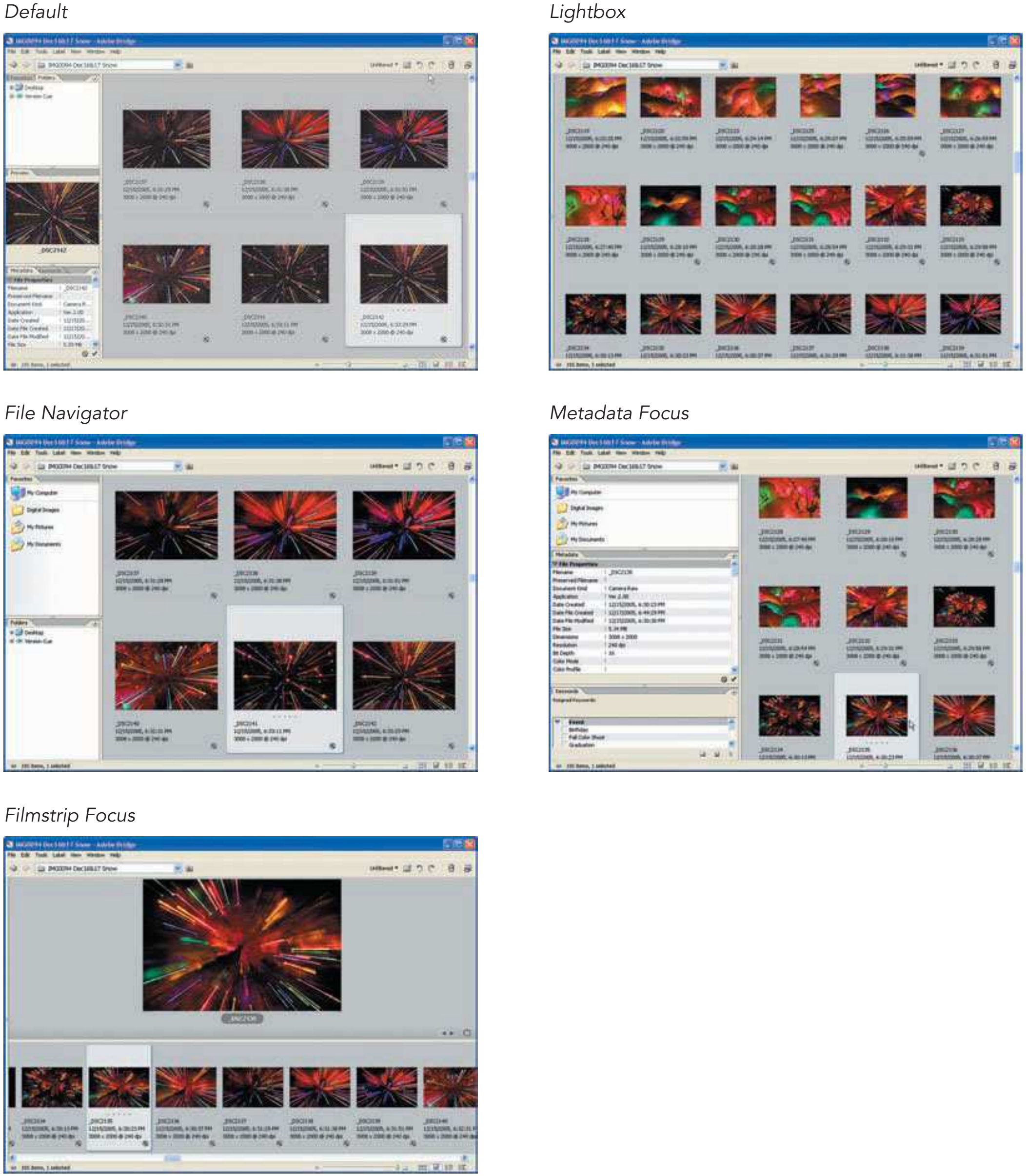


Figure 8.4 Working with images in different Bridge workspaces

Customizing and Using Bridge Functions

One of the benefits to using Bridge is that you have the ability to customize the software to best match your needs. The ability to choose workspaces gives you control of how you work with Bridge. Many other image-editing or image-organizing programs don't let you customize panels and work areas, but Adobe has gone out of their way to make Bridge customizable to fit your tastes or needs. You can even change the background color of the work area, although your only choices are black, white, and shades of gray. For images, you can put a lot of detailed information in metadata and manage it with Bridge. You can even specify which metadata fields are viewable. You might not use even a fraction of the customizable options Bridge offers, but you have them if you need them.

Some of the options you have for changing how Bridge and its sections appear include the following:

- **Changing your workspace.** The Window menu offers a useful range of workspaces, but the one I use most is the default. It includes the Favorites/Folders section, a small preview, and Metadata and Keywords panels, which is everything I need for my image-management work.
- **Resizing panels and the Content Area.** You can easily resize your panels and the size of the Content Area by dragging the borders, as shown in Figure 8.5.
- **Resizing the Bridge window.** In the bottom-right area of the Bridge window, you can drag the corner (shown in Figure 8.6) to resize the entire Bridge window (unless you've maximized it already by clicking the Maximize button in the upper-right corner of the window).

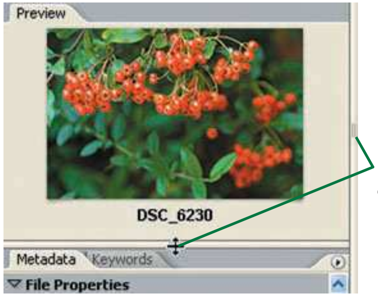
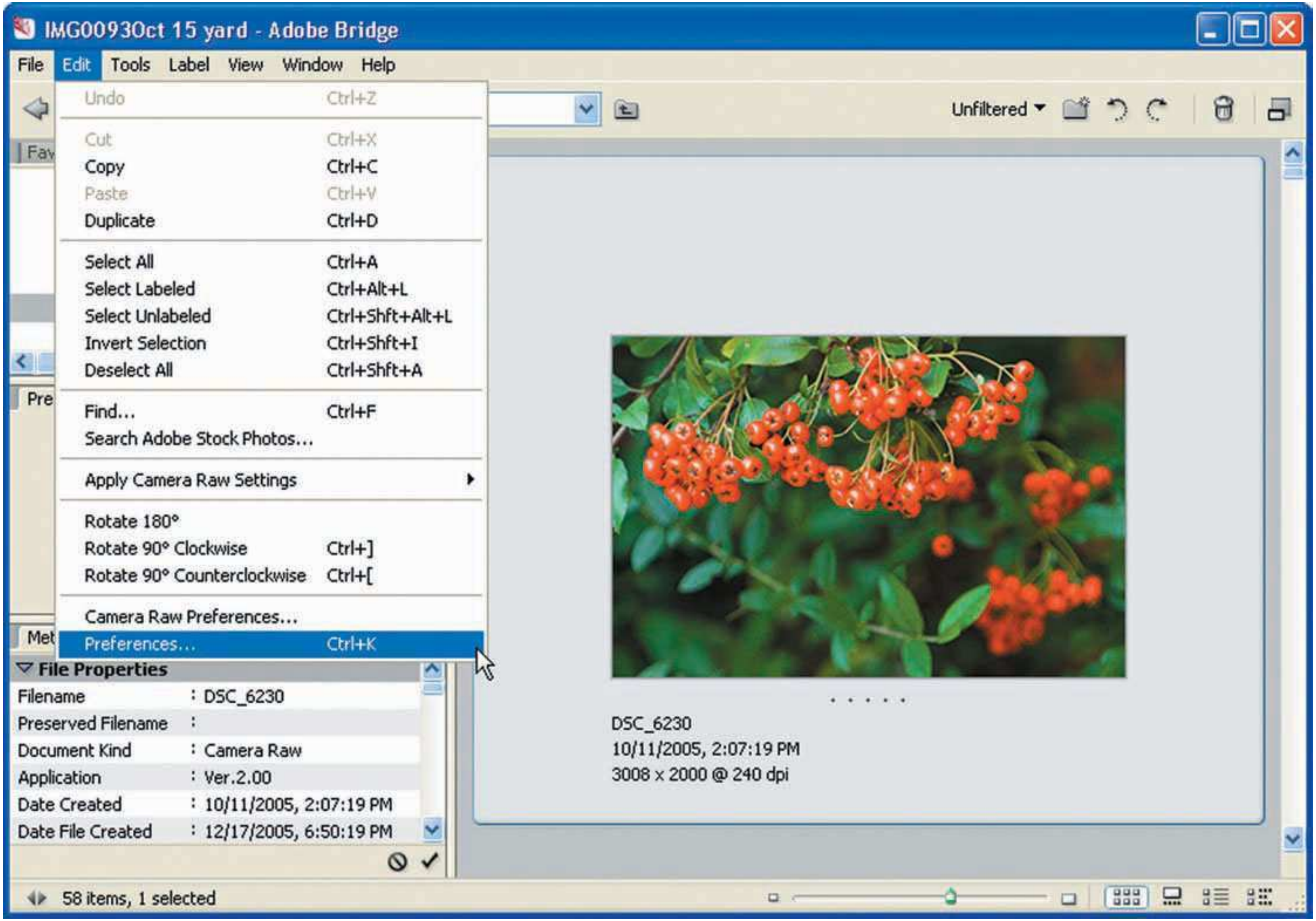


Figure 8.5 Resizing panels is as easy as dragging panel borders.

Figure 8.6 Resizing the Bridge window is easy as well.


IMG0093Oct 15 yard - Adobe Bridge
File
Edit
Tools
Label
View
Window
Help
Undo Ctrl+Z
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Duplicate Ctrl+D
Select All Ctrl+A
Select Labeled Ctrl+Alt+L
Select Unlabeled Ctrl+Shft+Alt+L
Invert Selection Ctrl+Shft+I
Deselect All Ctrl+Shft+A
Find... Ctrl+F
Search Adobe Stock Photos...
Apply Camera Raw Settings
Rotate 180°
Rotate 90° Clockwise Ctrl+]
Rotate 90° Counterclockwise Ctrl+[
Camera Raw Preferences...
Preferences... Ctrl+K
Unfiltered
File Properties
Filename : DSC_6230
Preserved Filename :
Document Kind : Camera Raw
Application : Ver.2.00
Date Created : 10/11/2005, 2:07:19 PM
Date File Created : 12/17/2005, 6:50:19 PM
DSC_6230
10/11/2005, 2:07:19 PM
3008 x 2000 @ 240 dpi
58 items, 1 selected

- **Changing views.** My preferred view is the default (F1), but if you'd rather look at your thumbnails in Filmstrip view (F5), as shown in Figure 8.7, click the Filmstrip View button at the bottom-right of the Bridge window.

  If you're comparing and analyzing your images, you'll want to view them with more image data displayed. The Details view provides a view of each image in the work area, showing more file properties than are displayed in the other views.

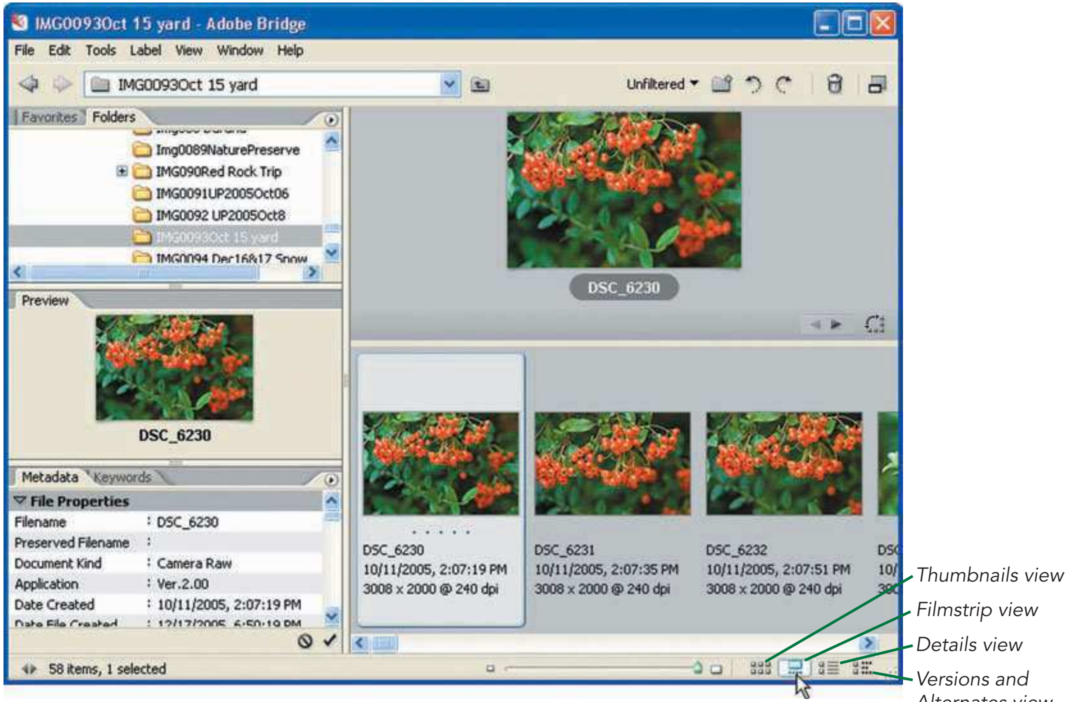


Figure 8.7 Changing views is as easy as clicking a button.

Changing Bridge Preferences

If you thought that customizing Bridge ended at resizing panels or changing workspaces and views, there's more customization to be had! In the Preferences menu (Edit, Preferences) Bridge gives you some detailed options for changing window colors and specifying which metadata fields to display with thumbnails. To change Bridge preferences, follow these steps.

1. **Start Preferences by choosing Edit, Preferences (or press Ctrl+K on a PC or Command+K on a Mac).** The Preferences window gives you various ways (in the left column) to modify your preference settings: General, Metadata, Labels, File Type Associations, Advanced, and Adobe Stock Photos. The default choice is General Preferences, as shown in Figure 8.8.

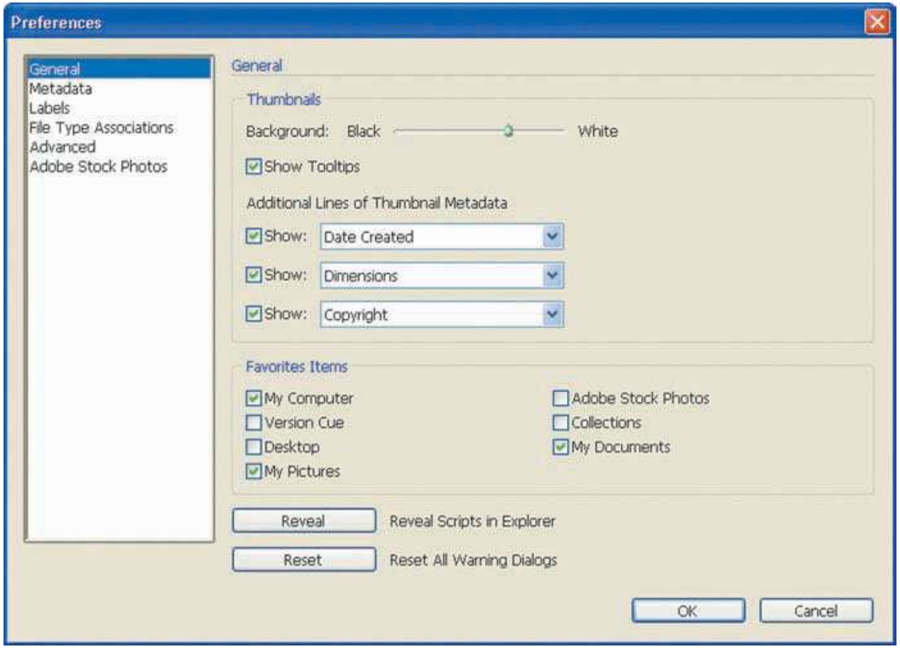


Figure 8.8 The General Preferences tab

2. **Change the Content Area background to black, white, or gray.** If you're a radical and you like to work with black or gray backgrounds, you can change the background of the Content Area in Bridge. Kind of like choosing a color for an old Model T, you can choose any color you want, as long as it's black, white, or gray, as shown in Figure 8.9. Use the Background slider in the Thumbnails section to adjust from black (at the left) to white (all the way to the right).

   A neutral gray background is actually best for viewing images or thumbnails, and that's true whether you're viewing images in Photoshop or Bridge, or even as prints on your desk. It's a scientific fact (I'm not really a scientist, but take my word for it) that your eyes can best judge colors without the interference of a white, black, or colored background. My tip of the day is to leave the background of the Content Area gray.

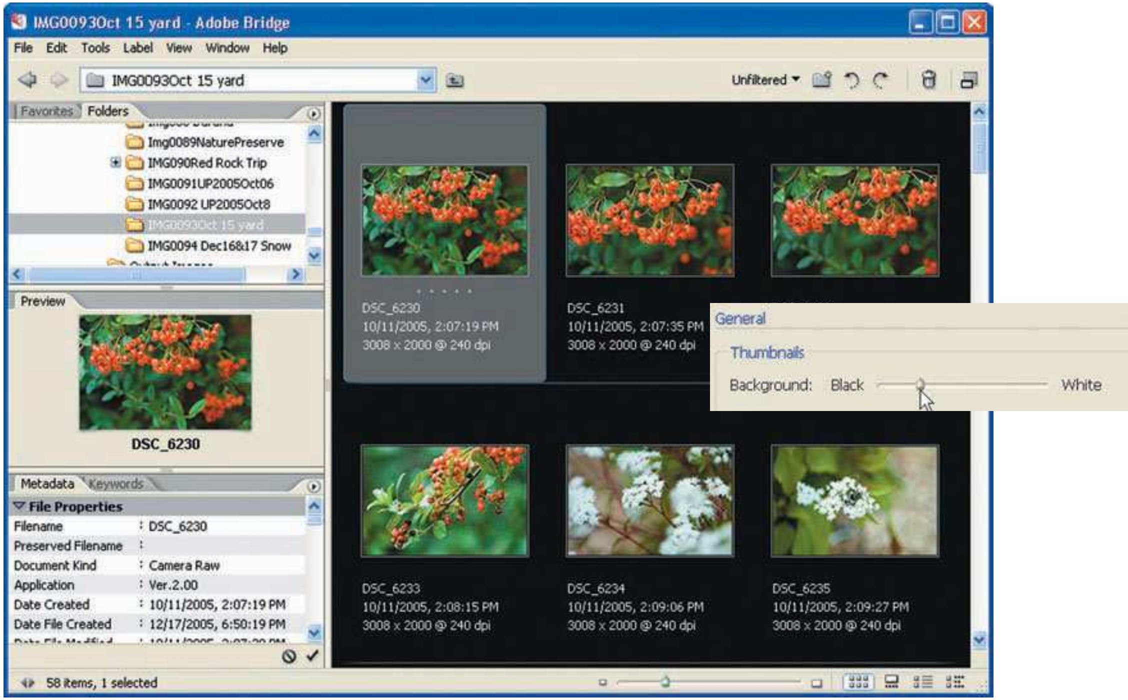


Figure 8.9 You can change the background color as long as it's to black, gray, or white.

3. **Modify the metadata displayed under thumbnails.** By default, thumbnails appear with the filename, date/time the image was taken, image dimensions, and keywords. Figure 8.10 shows a fourth-line change to show the description I've added in Metadata, which I specified using Additional Lines of Thumbnail Metadata in the third selection box.
4. **Customize the favorites.** Remember the Favorites panel? You can specify the areas of your computer that appear in Favorites by selecting what you want in Preferences Favorite Items.
5. **Customize the metadata preferences.** Click Metadata in the Preferences window to show the available metadata selections. There you can select and deselect the metadata fields you want to appear in the Metadata panel. Review the metadata default fields carefully.

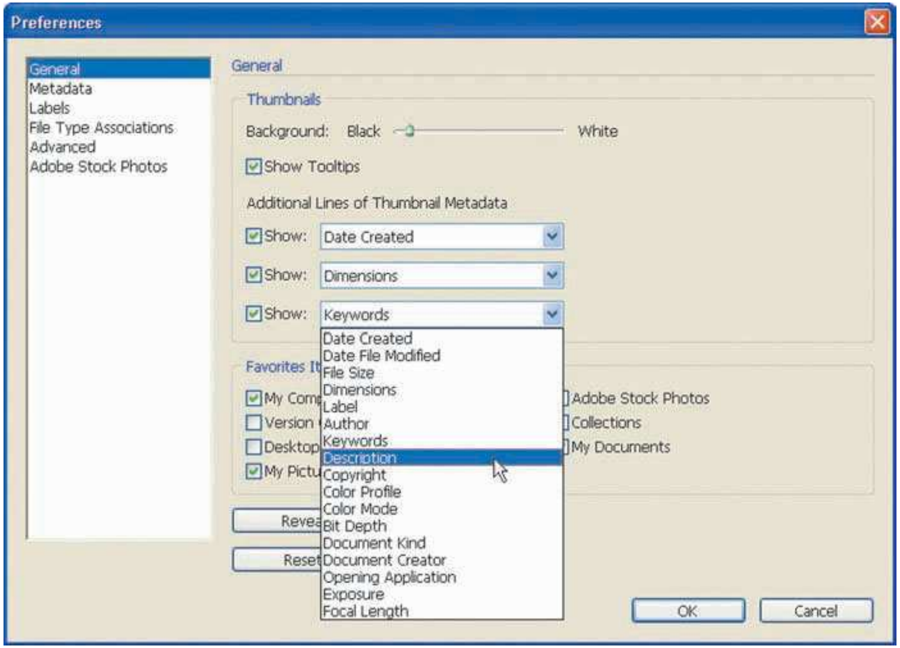
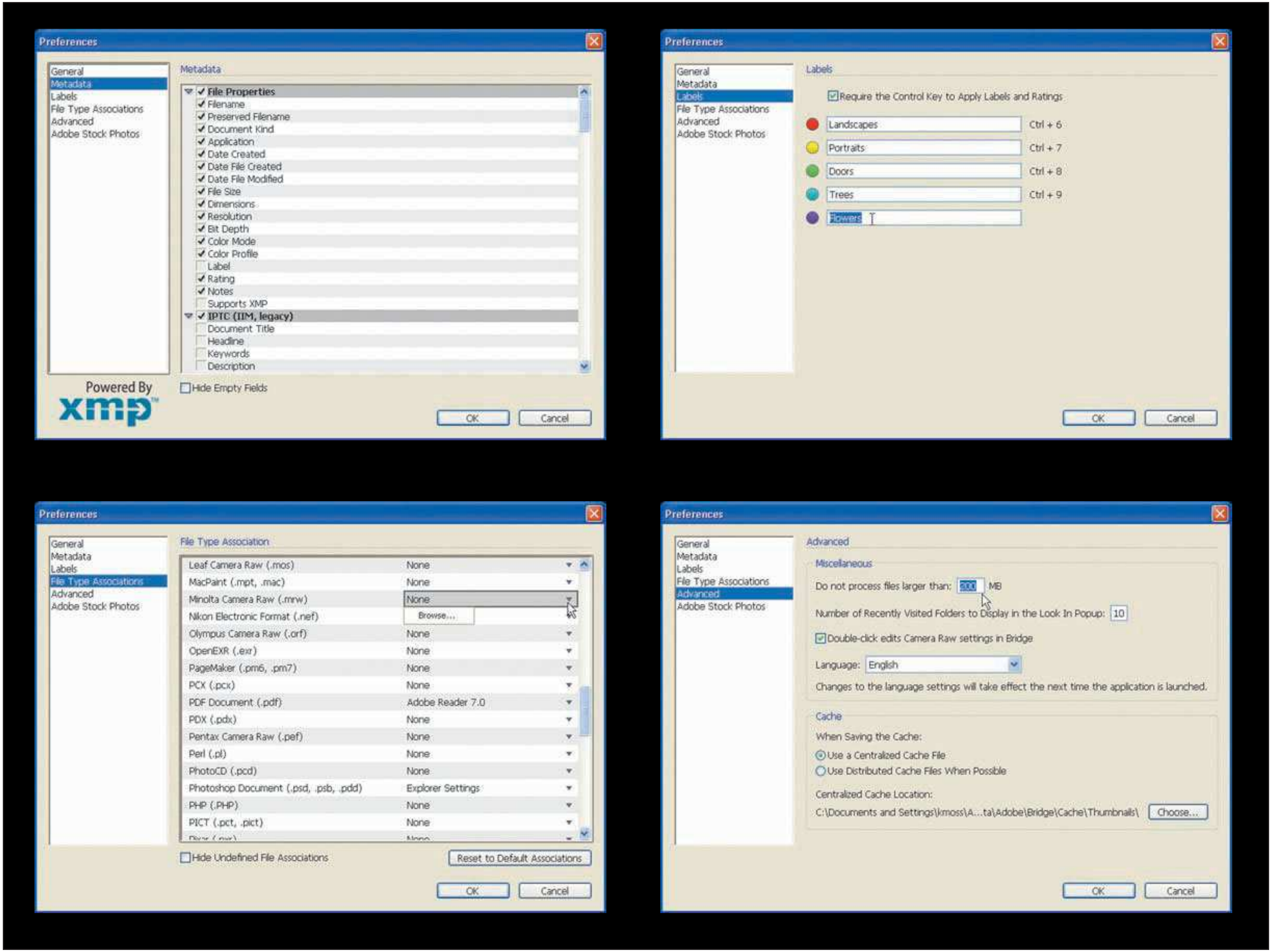


Figure 8.10 You can change the metadata information displayed under thumbnails.


Preferences
General
Metadata
Labels
File Type Associations
Advanced
Adobe Stock Photos
Metadata
File Properties
Filename
Preserved Filename
Document Kind
Application
Date Created
Date File Created
Date File Modified
File Size
Dimensions
Resolution
Bit Depth
Color Mode
Color Profile
Label
Rating
Notes
Supports XMP
IPTC (IIM, legacy)
Document Title
Headline
Keywords
Description
Hide Empty Fields
Powered By xmp
OK
Cancel
Preferences
Labels
Require the Control Key to Apply Labels and Ratings
Landscapes Ctrl + 6
Portraits Ctrl + 7
Doors Ctrl + 8
Trees Ctrl + 9
Flowers
OK
Cancel
Preferences
File Type Association
Leaf Camera Raw (.mos) None
MacPaint (.mpt, .mac) None
Minolta Camera Raw (.mrw) None
Nikon Electronic Format (.nef) Browse...
Olympus Camera Raw (.orf) None
OpenEXR (.exr) None
PageMaker (.pm6, .pm7) None
PCX (.pcx) None
PDF Document (.pdf) Adobe Reader 7.0
PDX (.pdx) None
Pentax Camera Raw (.pef) None
Perl (.pl) None
PhotoCD (.pcd) None
Photoshop Document (.psd, .psb, .pdd) Explorer Settings
PHP (.PHP) None
PICT (.pct, .pict) None
Hide Undefined File Associations
Reset to Default Associations
OK
Cancel
Preferences
Advanced
Miscellaneous
Do not process files larger than: 200 MB
Number of Recently Visited Folders to Display in the Look In Popup: 10
Double-click edits Camera Raw settings in Bridge
Language: English
Changes to the language settings will take effect the next time the application is launched.
Cache
When Saving the Cache:
Use a Centralized Cache File
Use Distributed Cache Files When Possible
Centralized Cache Location:
C:\Documents and Settings\kmoss\A...ta\Adobe\Bridge\Cache\Thumbnails\
Choose...
OK
Cancel

6. **Modify label definitions.** You can apply color labels to your images, but you can also customize the descriptions of your color labels in the Labels section of Preferences. The default for each color label is simply the color name, but you can customize these names to fit your own labeling system.
7. **Modify file type associations.** I recommend leaving this section of Preferences alone. You can change the software programs associated with file types (if you're a Windows user, you can do that in Control Panel, Folder Options, and on a Mac, you can do it in File, Get Info, Open With), but why do that if you're happy with the way things are working on your computer? You're not likely to need this section unless something unusual is going on.
8. **Change miscellaneous settings.** The advanced Preferences give you more ways to customize how Bridge works. You can set the largest file you'll let Bridge open, how many recently viewed folders the Look In pop-up shows you, and whether to use double-clicking to edit Camera Raw settings. I tend to leave these settings alone, but if you're bored one day take a look at the options to see whether you can tweak your Bridge settings to your liking.

Working with Images

Bridge provides super integration between the Creative Suite programs, but if you only use Photoshop it works great as your standalone or integrated program to organize, browse, or locate photos. Bridge also serves as the launching point to process raw images in Camera Raw.

To work with images in Bridge, follow these steps:

1. **Start Photoshop CS2 by either double-clicking the icon on your desktop or choosing Start, Photoshop CS2.** You can also press Alt+Ctrl+O on a PC or use the shortcut for Browse on a Mac.
2. **From Photoshop, choose File, Browse or just click the Go to Bridge button.** The Go to Bridge button is located on the right side of the Photoshop CS2 Option bar shown in Figure 8.11.

Figure 8.11 Start Bridge by clicking the Go to Bridge button on the Photoshop Option bar.

3. **Browse folders.** Click the Folders tab. This shows you your computer's drives and folders, allowing you to navigate your computer's folders to locate the folder you want to view, such as a newly created folder of images you've just taken (as shown in Figure 8.12). Notice the cool black background in the figure? I'll be changing that back to a neutral gray shortly.

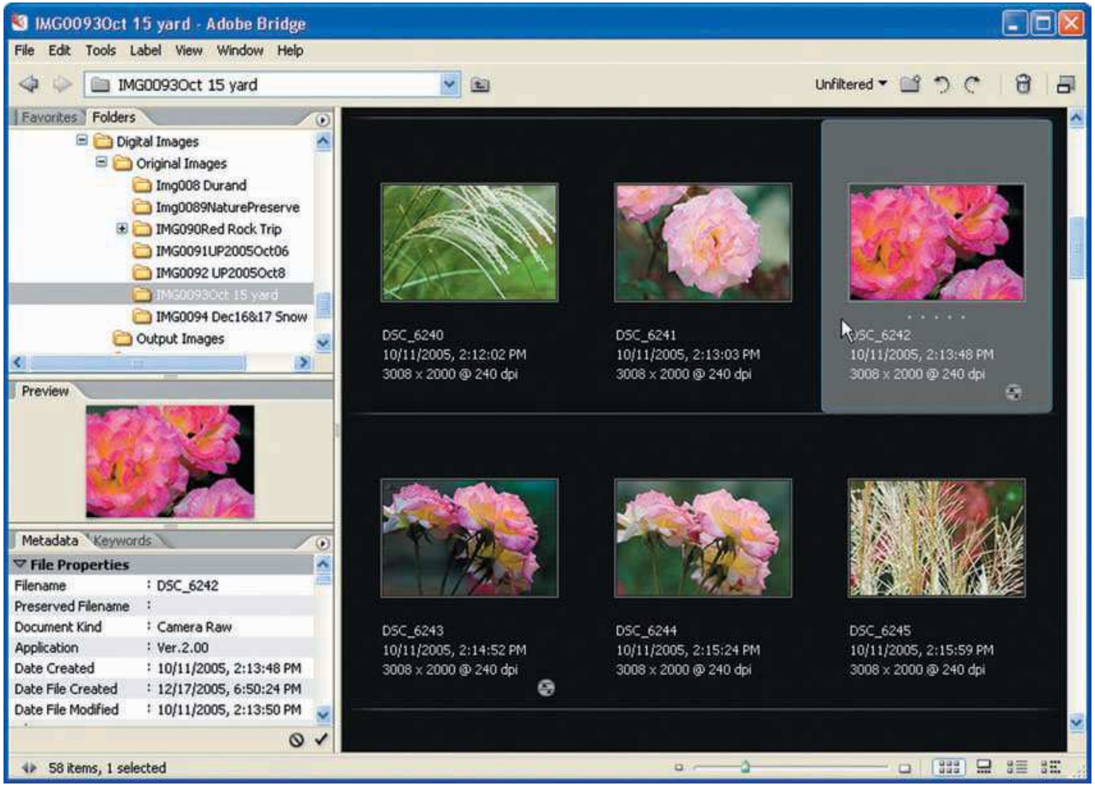


Figure 8.12 Locate folders by clicking through the folder tree on the Folders tab.

4. **Click on the folder to view.** Clicking on a folder in the Folder tab will display the images in that folder in the Bridge Content Area.

> **TIP**
> *Creating your image folders and downloading images to the same area on your computer makes it easier for you to locate images in Bridge.*

5. **Click on an image.** Clicking an image in the Bridge Content Area shows you its metadata (information such as the camera settings you used when you shot the photo) in the Metadata tab, along with a thumbnail of the image in the Preview area, as shown in Figure 8.13.

Figure 8.13 Clicking on an image provides a preview of the image on the Preview tab, as well as the metadata information on the Metadata tab.

> **TIP**
> *After you've selected a photo, slide the Resize Thumbnails slider (located on the bottom-right of the Content Area) all the way to the right to enlarge the thumbnail and get a better view of the image. You'll be able to see more image detail to better judge whether the image is sharp enough or focused correctly. Images can look great when they are viewed as smaller thumbnails, but when you view them at larger sizes, you can better judge whether the images are good enough to use.*

6. **Open the image.** After you've browsed folders and selected an image in Bridge, double-click the thumbnail to open the image. If the image is a raw file, it will open automatically in Camera Raw. If the image is in another format (such as JPEG, TIFF, or PSD), it will open automatically in Photoshop. You can also right-click (Ctrl+click on a Mac) and choose Open from the menu to open the image (see Figure 8.14).

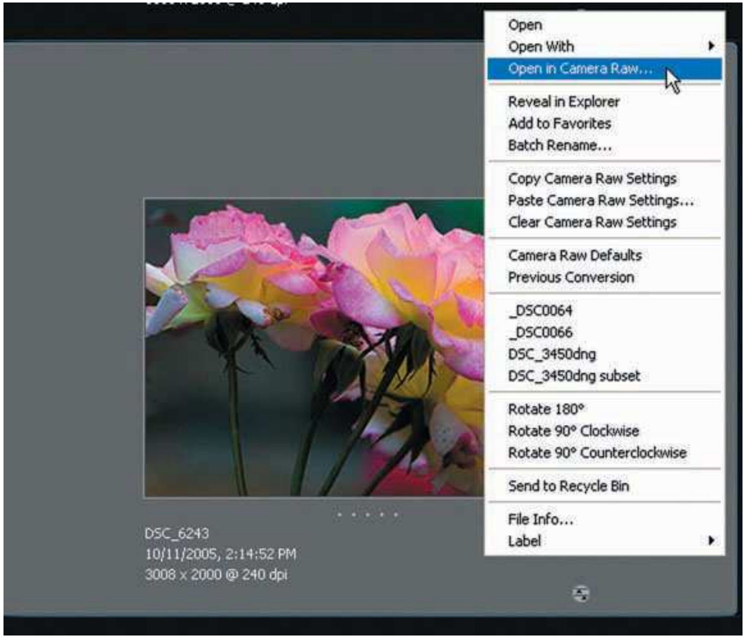


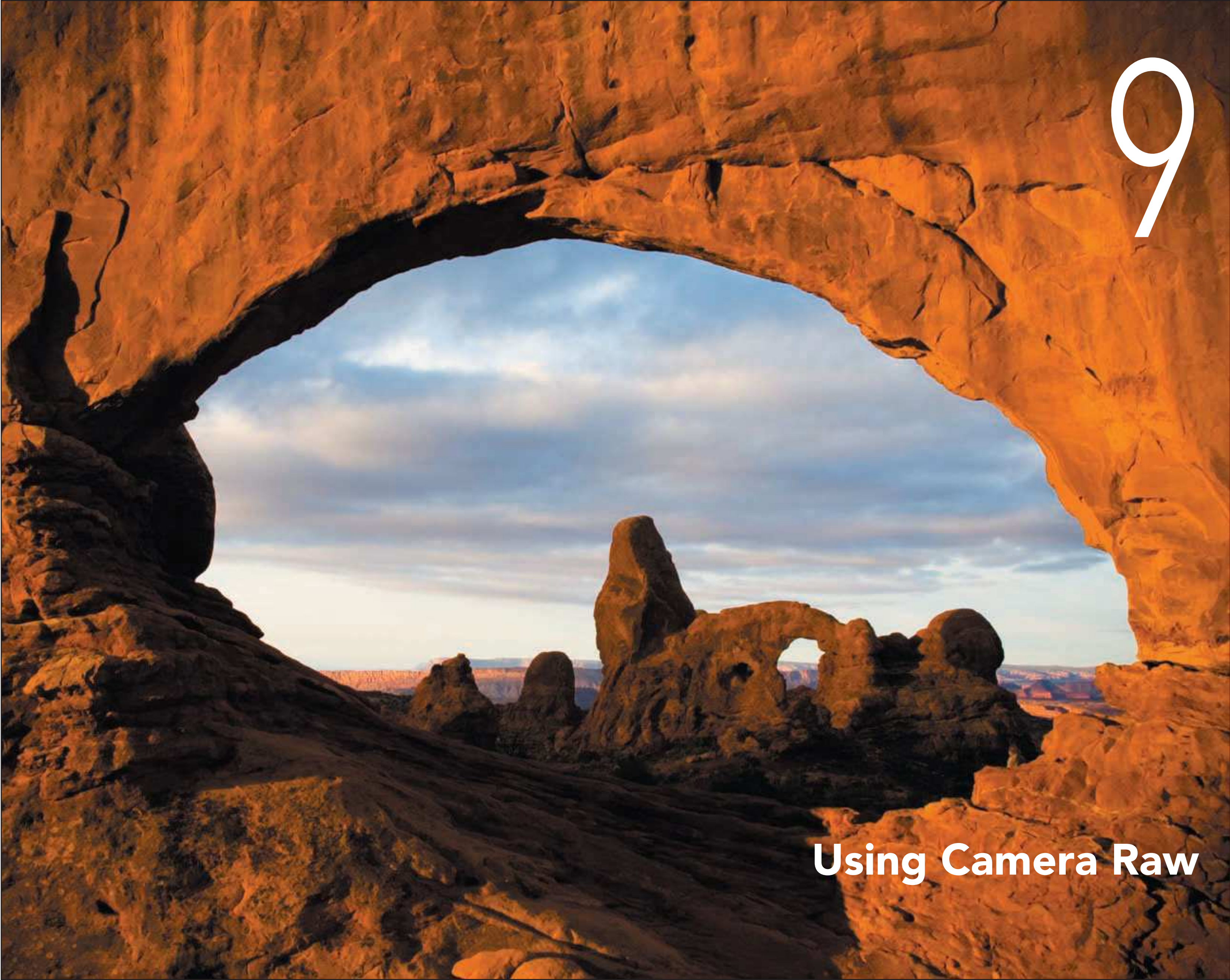
Figure 8.14 Right-clicking (or Ctrl-clicking on a Mac) lets you choose from a menu of options what to do with an image, including opening it in either Photoshop or Camera Raw.

Summary

If you've experimented with Bridge, you realize the power it gives you over managing your images and its usefulness as a great virtual light table (on steroids) that you can use as a visual interface to Photoshop and Camera Raw. After getting comfortable using Bridge, you'll discover that you will be replacing your old image-management habits and becoming much more productive at managing and navigating your thousands of nature images.

In summary, these are the steps to a successful image-management system—your image-management workflow:

1. **Plan how you want to organize your images.** I've given you the example of creating one master folder (called Digital Images) with three subfolders: Original Images, Working Images, and Output Images. It's in those Original, Working, and Output folders that you store all of your image folders. As a tip, make sure you name your folders in a descriptive manner that provides a chronology, content, and date method.
2. **Make backups of all your images.** Immediately after downloading the images on your memory cards to your computer, back up to optical discs and/or an external hard disk. These are your originals, just like negatives. You want to protect yourself from losing these because original images are not replaceable if you have a computer catastrophe or theft.
3. **Customize Bridge.** I've gone into great detail about how you can customize the appearance and functions of Bridge. Honestly, I usually stick close to defaults—hey, they work for me—but your needs might be much different from mine or those of any other nature photographer, for that matter.
4. **Add metadata to your images.** Get in the habit of rating images, adding descriptions, and adding keywords in the Metadata tab. It's time-consuming up front, but it will save you a lot of time later. When your image library grows, it will be easy to view images according to your ratings. It's a great way to separate the duds from the studs (hey, I should patent that saying) and it will save you time when you are cruising for images to process in Photoshop or looking for all of your top butterfly images.
5. **Have fun.** One of the most exciting things about digital photography is when you first view your newly downloaded (and backed up) images on your computer. It's the same feeling us old-timers got when we watched prints magically appear in the darkroom developer tray.



9

Using Camera Raw

I became enlightened about the raw file format a few years ago. Up until then, I was shooting all of my digital images in the highest-quality JPEG format my digital cameras offered. I obtained many a worthy nature and landscape photo that way, but I ran into some limitations. I realized that I had very little latitude to underexpose or overexpose images and that I had a problem with image noise. Actually, the image noise would drive me crazy. Many of my landscape photos included big skies with long exposures, which would result in those little color-speckled thingies in the shadows (technical terminology, you understand), also known as *image noise*. Yes, I could use the Photoshop Reduce Noise filter, but even that had a cost to it (reduced sharpness when using the filter). I also had to rely on my digital camera to calculate the proper white balance, which was accurate most of the time. The times when white balance was off, giving my images a color tint, were a pain in the mouse to correct in Photoshop. With problems with noise, exposure, and white balance, I realized it was time for something better. After all, these tools are digital, aren't they?

When digital camera manufacturers started shipping their higher-end digital cameras (usually digital SLRs or advanced compacts) with the new raw format, I got excited. I went out and got me one of them new-fangled digital SLRs, just so I could take advantage of the raw file format. Excited as I was to have more control over exposure, noise reduction, color and tonal adjustments, and most of all, the ever-challenging white balance, I was actually disappointed in a big way. It wasn't disappointment in the actual digital camera and the raw format; it was disappointment with the software the manufacturer supplied with the camera.

I was able to process my raw images with the supplied software, but it was an extra step in my workflow. Shoot raw images, download to computer, open the images with the software that came with the digital camera, process the images, and then open them in Photoshop. And if I was using another brand of digital camera, I couldn't use the same software! It was proprietary to that particular make of camera. Great—proprietary raw conversion software, just what I needed! That is, until I found Camera Raw, a compatible, digital camera–independent raw conversion software.

Advantages to Raw

Serious digital nature photographers have always wanted a file format that works like the digital equivalent of a traditional negative, providing total control over processing the image data captured by the digital camera. Digital cameras do a pretty good job of getting general settings correct, but when was the last time you didn't have to make any adjustments in Photoshop after the image was taken? In the past few years, new digital camera models have delivered just what we wanted—the raw image format. The software that gives you full control over processing these images is Adobe Camera Raw.

In the past few years, there's been a lot of argument over the issue of shooting raw versus JPEG format. Some professionals will even tell you that they don't bother with raw; they "get it right the first time." Personally, I don't buy that argument, primarily because I am much more particular about controlling color, tone, noise, and exposure in my digital images. When you're out in the field, where nature photographers are, it's often hard to tell whether exposure, color, and tone are correct by viewing images on your digital camera's LCD. It's difficult to accurately view the image on that little screen while outdoors! Our internal digital camera meters usually do a good job, but often there are more tweaks that can be made.

Advantages to shooting images in raw format and processing them in Camera Raw include

- **Artistic control.** Today's digital SLR and advanced compact cameras can capture images in raw format, leaving the enhancements up to the digital photographer. That unprocessed image file, a digital negative, provides more artistic control. As a nature photographer, I shoot in raw format because it gives me better creative control over the image data captured by my digital camera, especially color. Raw format gives me an image file created exactly as the digital camera's sensor captured it. I can adjust white balance, tint, brightness/contrast, and hue/saturation exactly the way I want, like in the raw image in Figure 9.1. I don't have to settle for how my digital camera's firmware (built-in internal software) processes the image.
- **Exposure and white-balance correction.** Shooting images in raw format gives me a huge advantage over shooting in JPEG; I can correct nearly any exposure or inaccurate white balance I might have made while shooting. As a rule of thumb, getting the correct exposure and white balance is still just good photographic practice. You have less tweaking to do later, but sometimes when you're out in the field taking photos, exact exposure or white balance just may not happen. Having the ability to make those corrections later is a big advantage. Raw format lets you use the capabilities of Photoshop to compensate for underexposed or overexposed photos without degrading the quality of the image. It's a nice backup if you ever need it.
- **Software compatibility.** As a new file format, not all raw images are the same. The actual image data collected by a digital camera's image sensor can vary noticeably from one manufacturer to another; the electronics are different from model to model. For that reason, camera manufacturers offer their own proprietary software to process the raw images produced by their cameras, and, in turn, each of their raw formats is different.

Unprocessed raw image

Color and tone adjusted in Camera Raw

Figure 9.1 Color and tonal adjustments are best made in Camera Raw instead of Photoshop whenever possible.

If you're shooting with a Nikon digital camera that offers the ability to capture raw images, you can process those raw files with a proprietary program, either Nikon Picture Project or Nikon Capture (advanced raw conversion software available at an additional cost). If you also own a Canon digital camera that produces raw images, however, you won't be able to use Nikon's software to process them. For those images, you have to use Canon's proprietary software, Digital Photo Professional. However, you can't process Nikon images using Canon's software. Personally, I shoot with both Canon and Nikon, and I really avoid using Nikon's or Canon's raw converting options. I'd much rather use one type of software for both, like Camera Raw.

Even different camera manufacturers have their own versions of the raw format; Adobe provides a standard platform you can use to process almost all manufacturers' raw image files, regardless of their proprietary formats. As an added bonus, Camera Raw can handle the whole process of adjusting and editing your raw images without you needing to add other software programs.

- **Non-destructive color and tonal adjustments.** One advantage of making color and tonal adjustments (also referred to as *overall adjustments*) in Camera Raw is that doing so keeps the overall quality of the image intact. Whenever you adjust the exposure, brightness, contrast, hue, and saturation in Photoshop, you actually destroy information in the image file. The more adjustments you make to the image, the more information you potentially destroy, degrading the overall quality of the image. Making as many of these overall adjustments as you can in Camera Raw will help guarantee that you retain the data that makes up the image file. Making overall adjustments in Camera Raw will definitely help you make higher-quality images.
- **The original raw image is never altered.** When you make changes to a raw file in Camera Raw, you actually don't change the original file. All of your changes are kept in another file called a *sidecar*. The Camera Raw sidecar file contains all of your changes, so you are never in danger of erroneously altering the original, keeping your "digital negative" intact.

Using Camera Raw

One big advantage of using Camera Raw for your raw processing needs is its constant improvement. Adobe first introduced Camera Raw with Photoshop version 7 and has consistently improved this tool with the next versions, CS and CS2. Recent improvements, such as clipping warning, curves, and auto adjustments, have made Camera Raw a powerful tool to process your raw images. Additionally, Camera Raw's integration with Adobe Bridge and Photoshop makes it the tool of choice for many photographers who shoot raw and use Photoshop.

Speaking of constant improvement, Adobe has added some welcome features of late. Camera Raw is a powerful enough tool that it's a good idea to get a handle on some of its new features before you dive right in. One of the new convenient features is the addition of auto adjustments in Camera Raw. When you open a raw image in Camera Raw, auto adjustments for exposure, shadows, brightness, and contrast are automatically made. For some images, auto settings for these adjustments might be sufficient; however, you're still going to want to adjust exposure, shadows, brightness, and contrast a bit to see whether you can get either better results or the effects that *you* want.

As I've mentioned, Camera Raw is a powerful enough tool that I ignore the raw image–conversion software from the manufacturers of the digital cameras I use. As standalone applications, the proprietary software is actually very good, but I like the idea of using one program that allows me to use raw files from different manufacturers' cameras and to work directly with Bridge and Photoshop CS2. So, my choice is simple: I use Camera Raw.

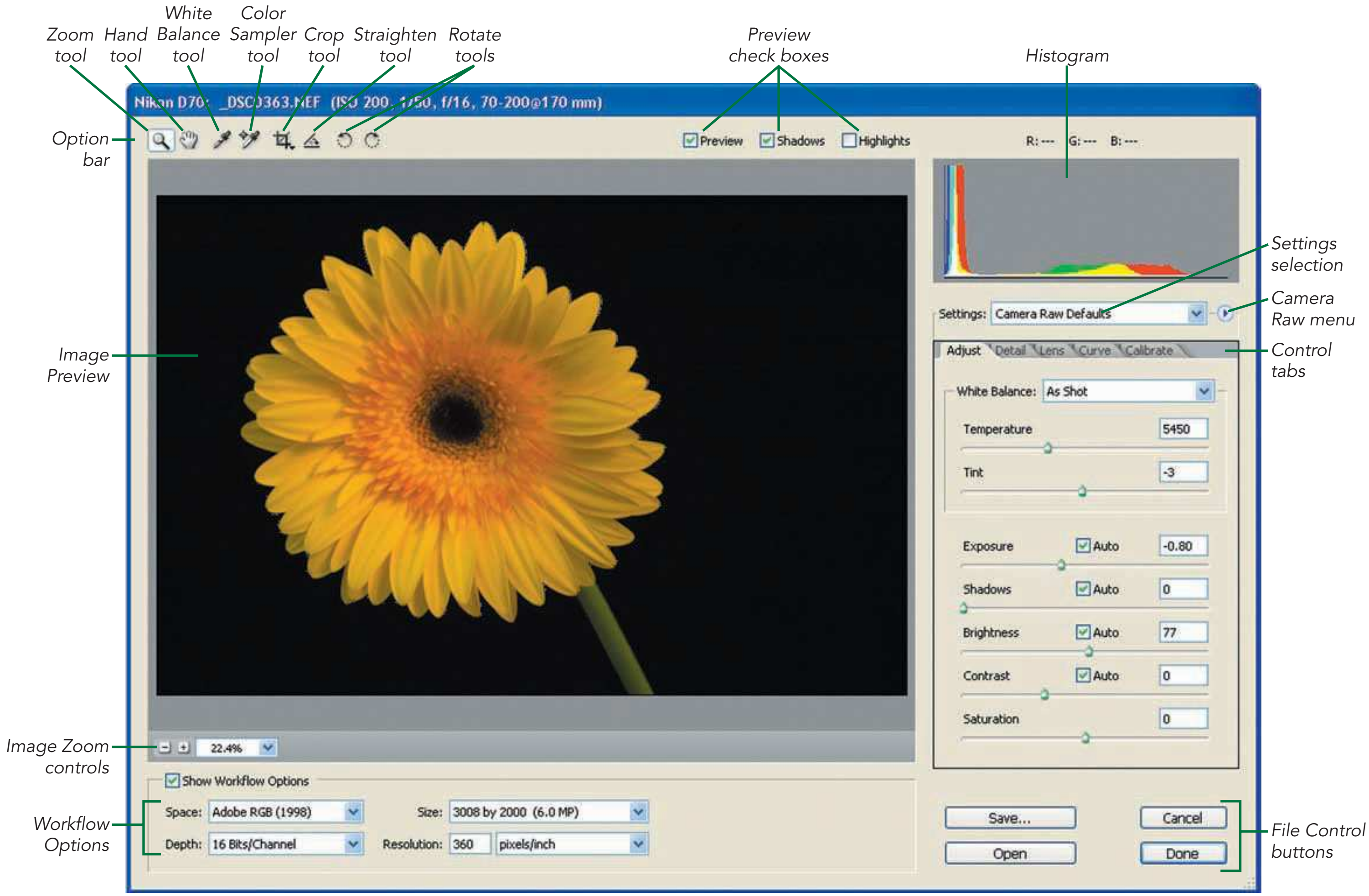


Figure 9.2 The Camera Raw window

Getting the Lay of the Land and Opening Images in Camera Raw

The Camera Raw window is laid out simply. Commands aren't buried in a series of menus, and the Control tabs are visible when you first open an image in Camera Raw (shown in Figure 9.2). Commonly used tools are easily available to you on the Camera Raw Option bar, and the Image window is simple to operate (with zoom controls laid out at the bottom of the image). The Camera Raw window is made up of these sections:

- **Option bar.** The Option bar provides tools to help you move around, select a white point of the image (to correct white balance), crop, straighten, and rotate an image. The Option bar also includes check boxes you can use to toggle the image preview on and off, an easy way to switch between the original (unadjusted) image and the image as it appears while you're making adjustments.
- **Image preview.** This is where you can view, zoom, crop, straighten, and rotate your image using the tools in the Option bar.
- **Workflow Options.** This is the area at the bottom of the Camera Raw window where you can modify the color space, size, and resolution of an image. In my workflow, I always make sure the settings in these selection boxes are set to my needs before I begin having my way with my raw image. As an additional benefit, workflow settings are "sticky"; when you open an image in Camera Raw, the settings will be the same as when you last used the program. It's very convenient!
- **Histogram.** The histogram is the graph displayed in the upper-right part of the Camera Raw menu—a graphical view of how much red, green, and blue make up the image and how these colors are distributed.
- **Control tabs**. The area to the right of the Camera Raw window contains tabs where Adjust, Detail, Lens, Curve, and Calibrate controls are located.

Getting Started Using Raw

Before the advent of the raw file format, digital camera users (and film shooters who scanned their negatives into digital images) typically worked with JPEG images in Photoshop, and most digital camera users still do. The typical workflow for processing the images in Photoshop is to first adjust levels, curves, color correction, and color saturation. If you have to adjust white balance, shadows, and tint in a JPEG, it can be very challenging in Photoshop. With Camera Raw, making those adjustments is a snap. I think it's actually easier and faster to make color and tonal corrections in Camera Raw than it is to do so in Photoshop!

Before reviewing how to make color and tonal adjustments in Camera Raw, I would like to quickly review which adjustments are tonal and which adjustments are for color.

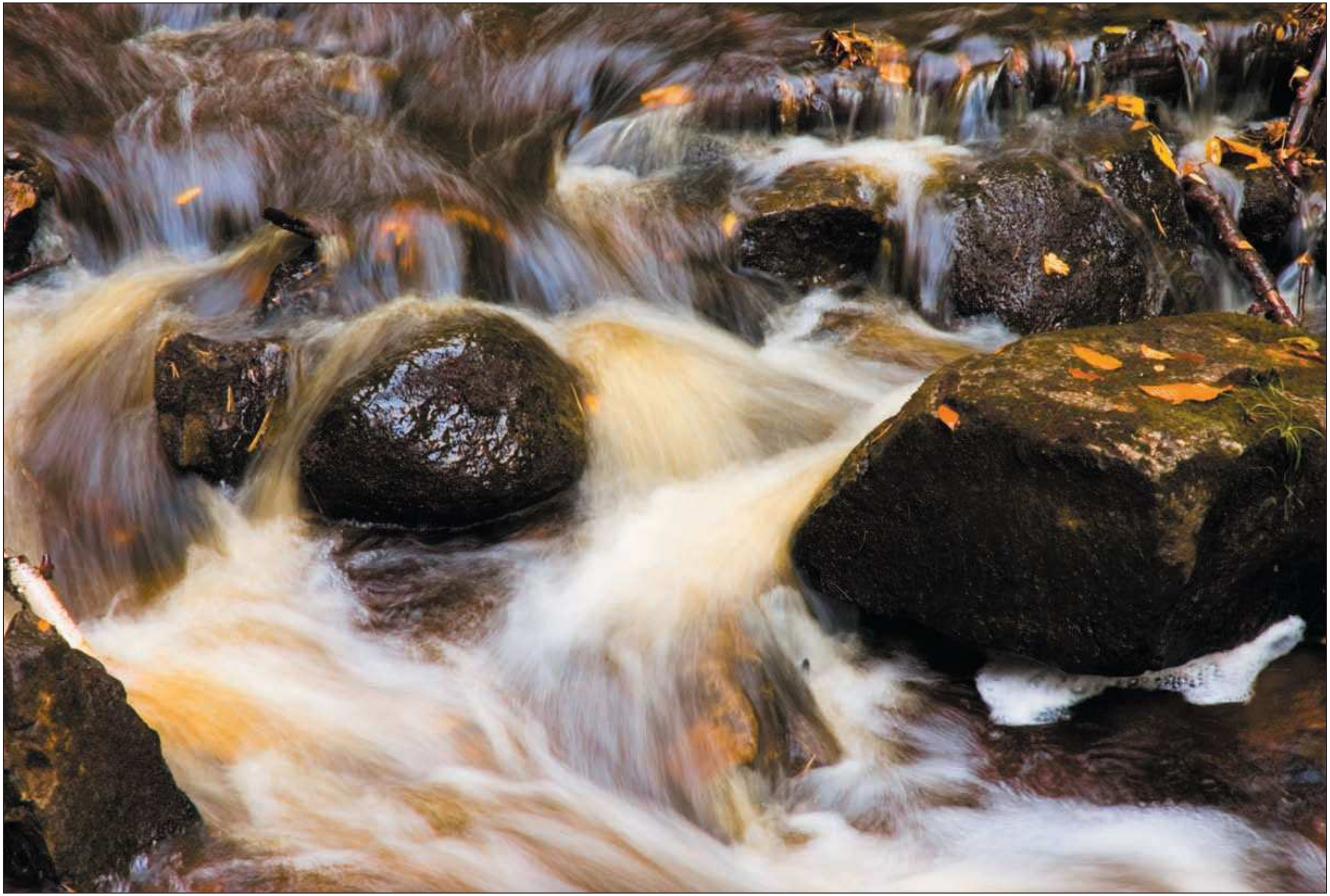
- **Tonal adjustments.** Tonal adjustments are changes that affect the overall tone of an image, such as brightness, contrast, shadows, curves, and exposure. In Photoshop, the Levels, Curves, and Brightness/Contrast controls are used to make tonal corrections.
- **Color adjustments.** Color adjustments are changes that affect the color of an image. Changes to color include adjusting white balance, tint, color balance, and hue/saturation.

The first obvious step in my raw conversion workflow is simple—open a raw image in Camera Raw and make sure my workflow settings are correct.

1. **Start Bridge (see Chapter 8).** Choose File, Browse or click the Go to Bridge button on the Photoshop Option bar. Browse images in the content area and choose the raw image you want to open in Camera Raw.
2. **Open a raw file**. In Bridge, choose a raw image you want to process by double-clicking the thumbnail of the image. Alternatively, you can right-click the image and choose Open with Camera Raw from the flyout menu.
3. **Make workflow settings**. Four selections in the Workflow Options area—Space, Depth, Size, and Resolution—allow you to customize how you want your image set up when you open the image in Photoshop after making raw adjustments.

   The Space selection lets you choose what color space (see Chapter 10, "Setting Up and Getting Around in Photoshop") you want associated with your image. For editing images with the intent of making prints, I always choose Adobe RGB (1998). If you will only be displaying your images onscreen or if you'll be doing both, choose Adobe RGB (1998); you can always change the color space later in Photoshop.

   The Depth setting tells Photoshop whether you want to edit your images in 16-bit or 8-bit space. I always leave this setting as is, at the 16-bit setting. This allows you to edit your images with more image data contained in your file, though some of the Photoshop filters will work with only 8-bit images. Again, I'll cover bit depth in more detail in Chapter 10.



The Size setting will default to the actual image size taken with your digital camera. For most of my work, I leave this at the native size, measured in megapixels, my digital camera has produced for me. You can use this setting to upsize your image—in other words, to make it bigger than the digital camera produced. That can be handy if you're planning to make large prints or crop to small areas of your image.

The Resolution setting lets you indicate the output resolution of the image. I usually leave this set to 360ppi because that is the optimum resolution used by my printer.

When you hear the term *overall adjustments*, it refers to general changes to color and tone. White balance, tint, shadows, exposure, brightness, contrast, hue, and color saturation are all considered overall adjustments.

The controls to make overall adjustments in the Camera Raw Adjust tab (see Figure 9.3) include

- **White Balance control.** White Balance can be adjusted using either the White Balance selection box or the Temperature control. The selection box gives you choices to change the white balance to better reflect what you have envisioned for the photo. You can choose from settings such as Cloudy, Daylight, Shade, and Fluorescent. Changing the settings in the White Balance selection box will

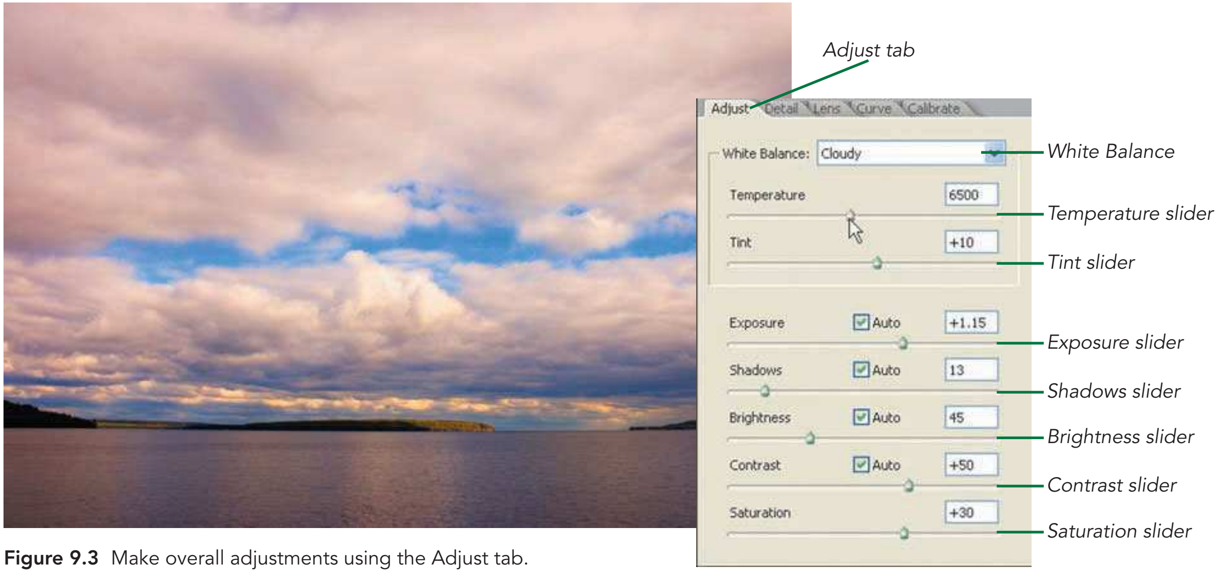
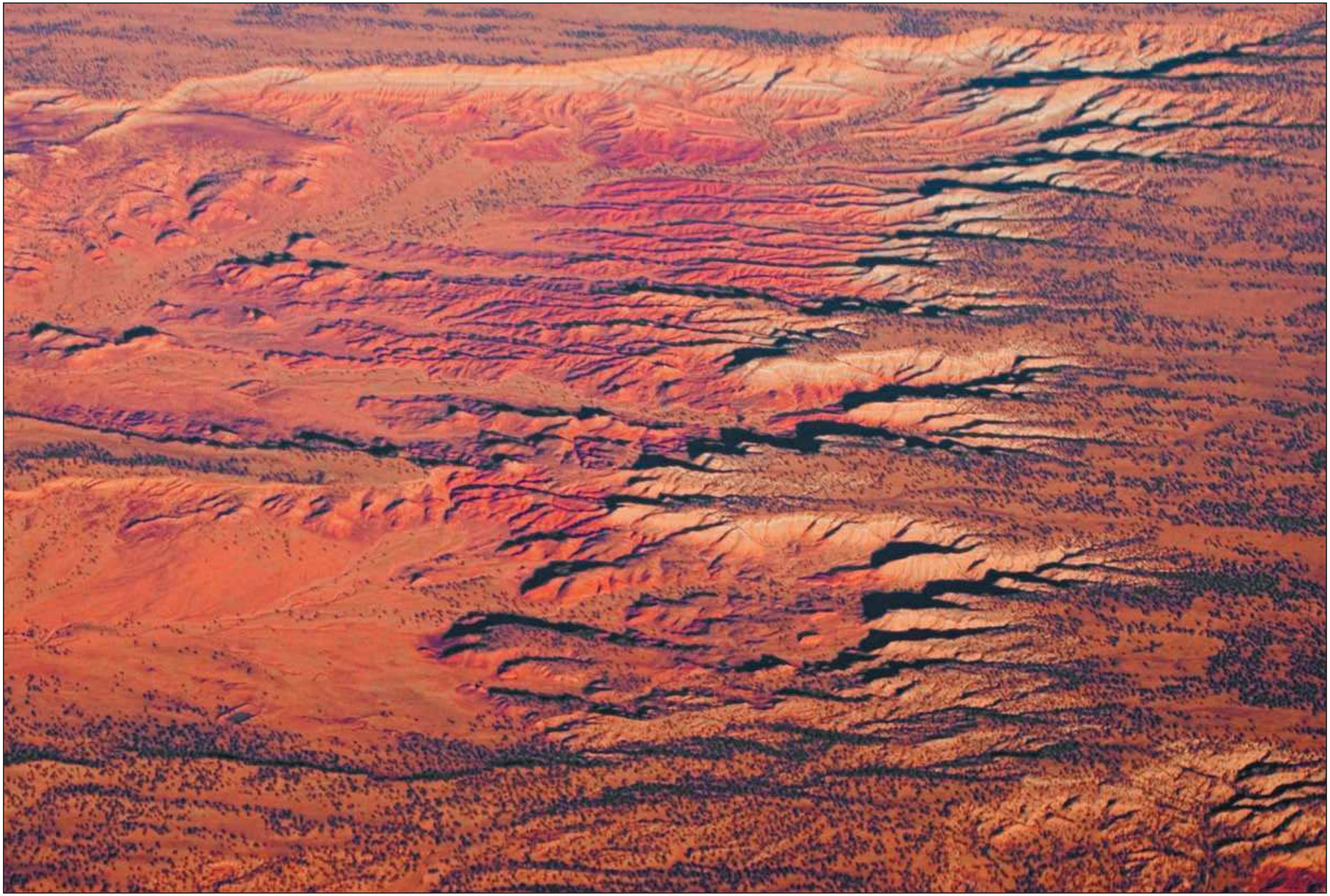


Figure 9.3 Make overall adjustments using the Adjust tab.



adjust both the Temperature and Tint to match the Camera Raw predetermined color conditions for that particular setting. For example, the Cloudy white-balance setting changes the Temperature control to 6500K and the Tint to a setting of +10.

The White Balance adjustment is best used on photos that had incorrect white-balance settings when they were shot.

- **Temperature and Tint controls.** For finer tuning of the white balance, you can adjust the Temperature and Tint separately by using the adjustment sliders for both of those adjustments.
- **Exposure control.** The Exposure control is the digital nature photographer's best friend. We all know the challenges to getting correct exposures in difficult lighting situations, and sometimes we'll take a photo in which only part of the image is properly exposed. The Exposure adjustment allows you to correct an image that's underexposed or overexposed. As with other adjustments in Camera Raw, increasing or decreasing the exposure to obtain the results you want doesn't degrade the quality of the image file.

  Click the Auto check box to let Camera Raw automatically adjust your exposure. Camera Raw will choose the optimum setting for the point at which the image isn't underexposed or overexposed, just shy of the point at which the shadows and highlights start to lose definition. This is called *clipping*.

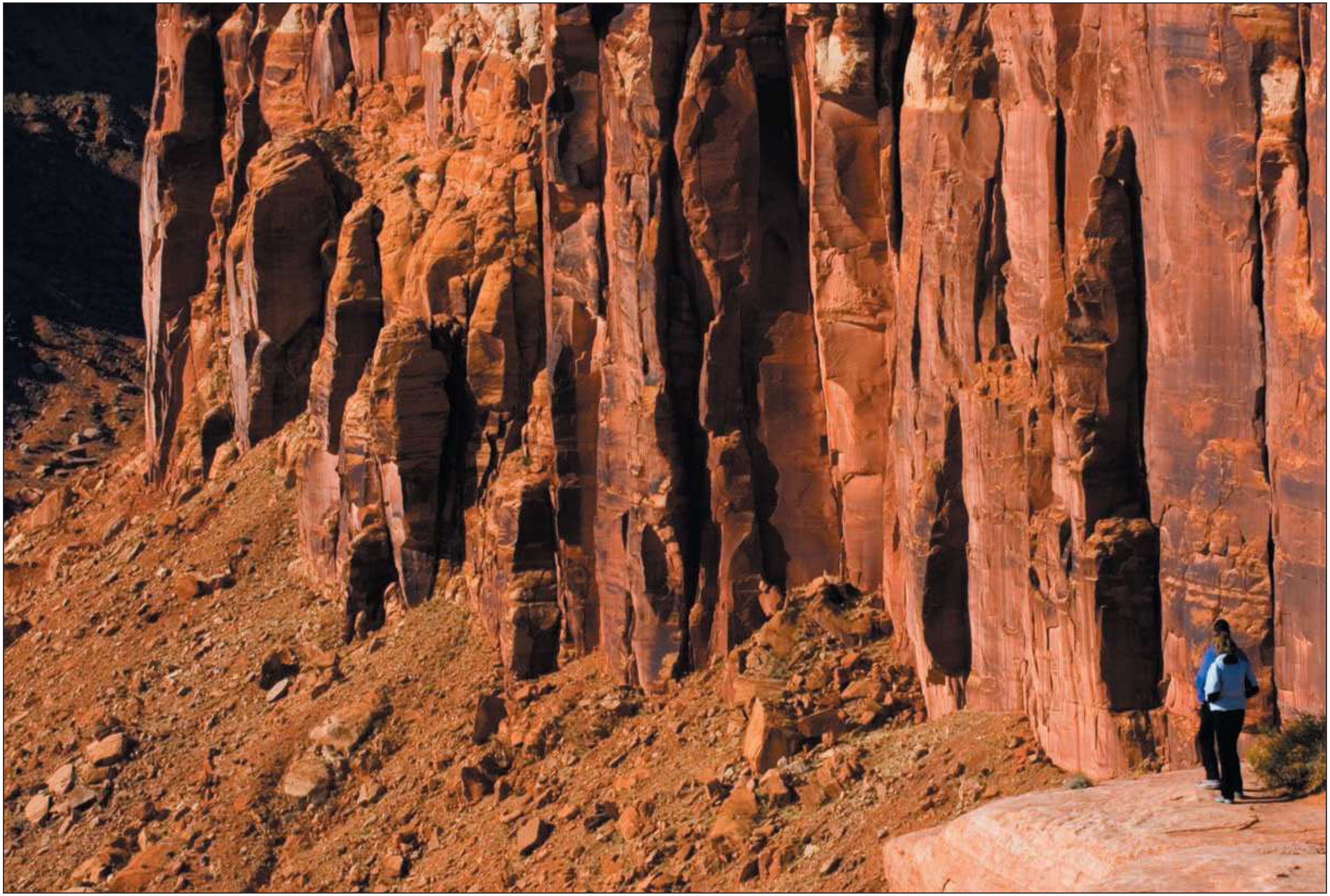
Figure 9.4 Highlights clipping warnings appear in the color red in Camera Raw, warning you when areas are being clipped.

  Changing any of the control settings or having overexposed areas of an image can cause clipping. Clipping occurs when too much of an adjustment or an overexposed area blows out highlights. Camera Raw provides you with clipping warnings by highlighting these areas in the color red (see Figure 9.4). On the Camera Raw Option bar, you'll find the Shadows and Highlights clipping warning check boxes. When these check boxes are checked, Camera Raw will warn you of areas where clipping in the highlights or shadows is occurring.

- **Shadows control.** Camera Raw lets you adjust shadow areas of your image by increasing or decreasing the brightness and tone in these areas without affecting the highlight areas. Try the Auto setting for Shadows first, or you can move the slider to the left or right to get the effect you want. Make sure you keep the Shadows check box checked to limit and monitor clipping. If clipping occurs while you're making a Shadows adjustment, move the slider to the left until the clipping in the shadowed areas disappears.
- **Brightness control.** The Brightness control allows you to increase or decrease brightness of your image. The Brightness control works independently of the Exposure setting and is best used in conjunction with other Camera Raw adjustments, such as Contrast and Saturation. Changing the contrast and saturation may require you to increase or decrease the brightness of the image slightly to compensate for the harsher changes. When using the Brightness control, keep in mind that you are changing all the pixels in the image, so be careful!
- **Contrast control.** The Contrast control simply allows you to darken the dark areas of an image while brightening the lighter areas of the image. Using the Auto setting for contrast might be optimal, but feel free to move the slider to the right to increase contrast in the image until you get the result you want. The Curves tab will give you even more control over the contrast in your image. I'll be covering Curves in the next section.
- **Saturation control.** Before you adjust a raw photo, it might appear to be lacking color and just plain dull. The color information is still in the file; all you have to do is increase the Saturation control to bring the color out. This is my favorite control. After making a few overall adjustments, I love adding color to the level at which I envisioned it. There isn't an Auto setting for saturation; it's up to you to add the level of color you want in your raw image.

The Raw Processing Workflow

In case you thought you were done processing your raw image using the Adjust tab, there's a whole lot more. I've introduced you to making settings in the Workflow area of the Camera Raw window and I've talked about making color and tonal adjustments in the Adjust tab. These are the basic tools to use when you are processing raw images. Let's take a step back, take a breather, and put all these processes together in a coherent workflow, including some goodies I haven't even shown you yet. I might be repeating some of the material I covered in the previous section, but bear with me—it all fits into the workflow I'm about to describe.



The workflow that I recommend to process raw images in Camera Raw consists of the following steps:

1. **Open a raw image using Bridge.**
2. **Click the Shadow and Highlights check boxes (next to the Preview check box) to turn on the clipping warnings.** I always keep these two check boxes selected. Shadows clipping warnings will appear in blue, and highlights clipping warnings will appear in red. The warnings call attention to where image data is lacking in color or tone—that is, where you're losing usable image data due to under- or over-adjustment of exposure, shadows, or brightness. Such warnings help you adjust the image in Camera Raw.
3. **Turn on Auto Adjustments.** Camera Raw will automatically adjust color and tone to what it calculates is optimum for the image. I've found that Auto Adjustments work extremely well in about 80 percent of my photos. To turn on Auto Adjustments, press Ctrl+U on a Windows PC or Cmd+U on a Mac.
4. **Make overall tonal and color adjustments in the Adjust tab (see the previous section).** When you open an image in Camera Raw, the Adjustments tab is automatically selected. The Adjustments tab contains all the controls you'll use to adjust white balance, tint, exposure, shadows, brightness, contrast, and saturation. Using Auto Adjustments in Step 3 will automatically assign values to exposure, shadows, brightness, and contrast, but you don't have to use the automatic settings. You can adjust the overall settings until you get the results you want. Remember, Camera Raw doesn't provide automatic adjustments for white balance, tint, or saturation. You're on your own when it comes to adjusting those settings.
5. **Apply sharpness and noise reduction.** Figure 9.5 shows the Camera Raw Detail tab, which offers three controls for applying sharpness and noise reduction to both the luminance and the color of the image. You can sharpen the outlines of the image and reduce those tiny messy bits in the grayscale areas and get rid of the color-speckle thingies (one of my technical terms) that show up in the color areas of the image. Both are referred to as *noise*.

> **TIP**
> *I never use the Sharpness control to sharpen my image. That step needs to come later, only after you resize your image for final output. You can turn off sharpening and use the sharpening control for preview only (in Camera Raw) by pressing CTRL+K (Cmd+K on a Mac) to bring up the Preferences window, shown in Figure 9.6. In the Preferences window, select Preview Images Only in the Apply Sharpening To selection box.*

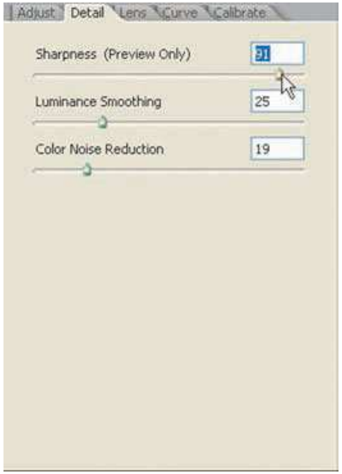


Figure 9.5 The Detail tab gives you controls to increase sharpness (for previewing only) and reduce noise in your image.

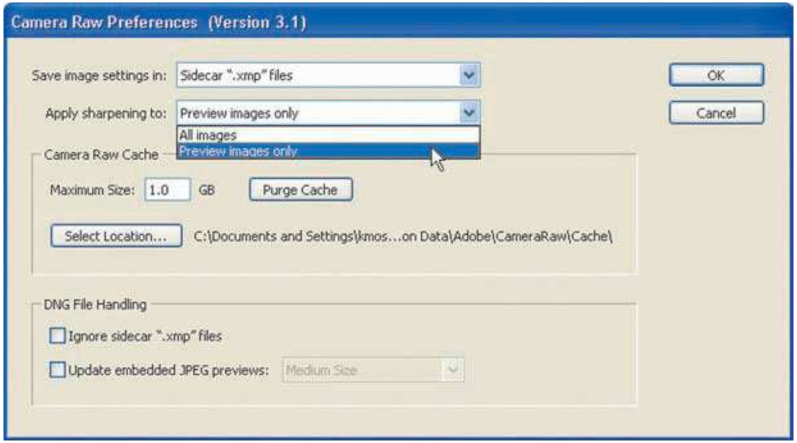
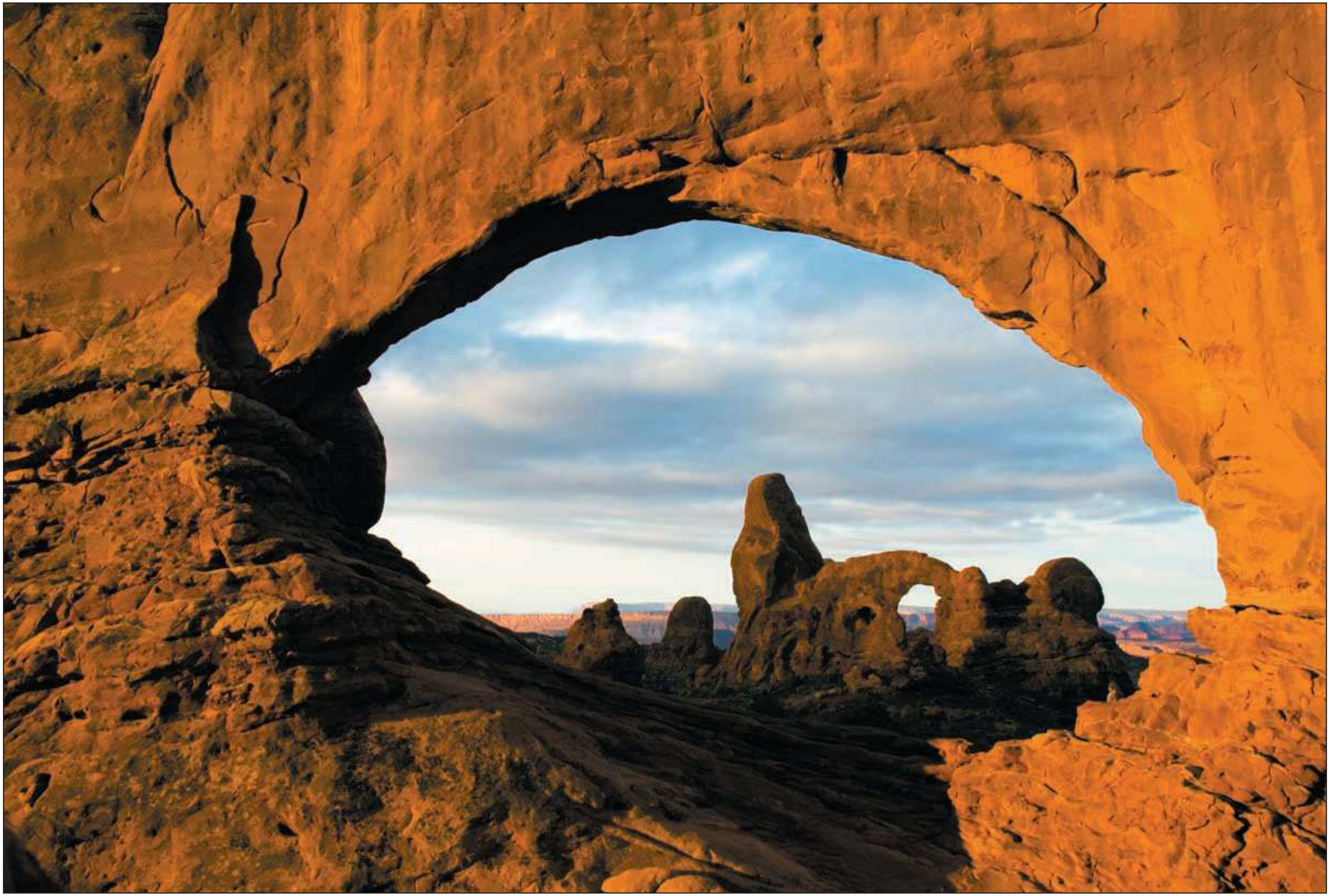


Figure 9.6 Make sure you apply sharpening to preview images only in the Preferences window.

The Luminance Smoothing slider is great for reducing grayscale noise, while the Color Noise Reduction slider is a hefty weapon against the color noise that can plague images shot in high ISO settings or long exposures. I usually use settings of 25 for the Luminance Smoothing control and 20 for the Color Noise Reduction control. Try your own settings while zooming in on your image to 100 percent in the preview window until you get results you are happy with.

TIP

Reducing luminance and color noise during the raw conversion workflow should be your preferred method for handling noise. Although Photoshop offers the new Reduce Noise filter, the goal is to be able to make as many adjustments as possible before you open images in Photoshop.



6. **Adjust contrast and tone using the Curve tab.** The Curve tab (shown in Figure 9.7) lets you fine-tune an image's tonal characteristics. Unlike the Curves adjustment in Photoshop, the Camera Raw Curve adjustment works on top of the adjustments made in the Adjust tab; it works like an adjustment's own "fine-tuning." I find that making careful changes in the Adjust tab reduces the need to make changes in the Curve tab.

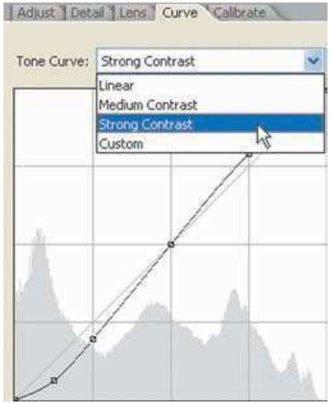


Figure 9.7 The Curve tab

> **NOTE**
> *Most of your tonal adjustments should be made using the Adjust tab, but when you want to fine-tune contrast and tone or just experiment, play around with using the Curve tab's Tone Curve selection box. You can view your image using the Medium Contrast and Strong Contrast preset adjustments. If you don't like the results of either, you can always leave the Curve adjustment set to its default (Linear).*

7. **Click Open to open the image in Photoshop CS2.** You can also click Done, but that will just save the Camera Raw settings for the image you've just made, and then take you back to Bridge. Clicking the Save button will allow you to save the raw file (and its sidecar file with your adjustments) to a folder of your choosing. You can also specify another format for the file—RAW, DNG, TIFF, JPEG, or PSD—but for the most part, you'll be opening the image in Photoshop for overall correction and image editing.

   At this point, Camera Raw saves your changes, but not to the original raw file. It leaves that alone, but it does add your changes to a *sidecar file*, created to contain changes you've added to the original raw image. These files are small and are given an .XMP file extension.

Two other adjustment tabs (see Figure 9.8) available in Camera Raw are usually used sparingly. Those would be the Lens and Calibrate tabs.

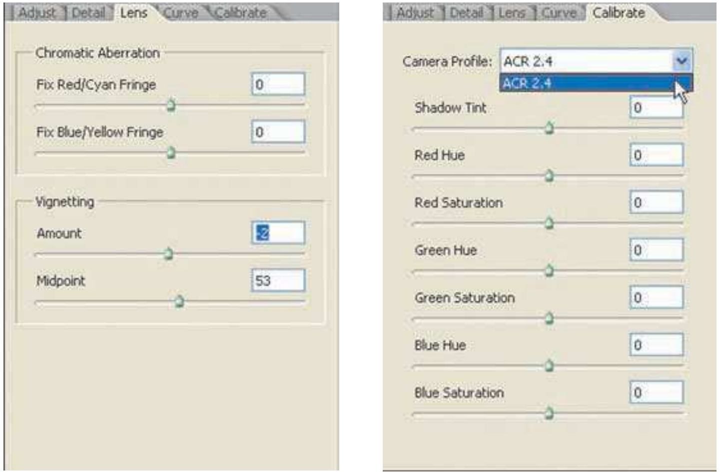


Figure 9.8 The Lens and Calibrate tabs

The Lens tab gives the photographer the ability to make corrections for lens shortcomings, such as chromatic aberrations (color fringing) or vignetting (dark edges in the frame). Most of the newer digital cameras offer excellent lenses, so you're really not going to need these controls much, but I do like to introduce some vignetting into some of my photos (see Figure 9.9). I like the effect!

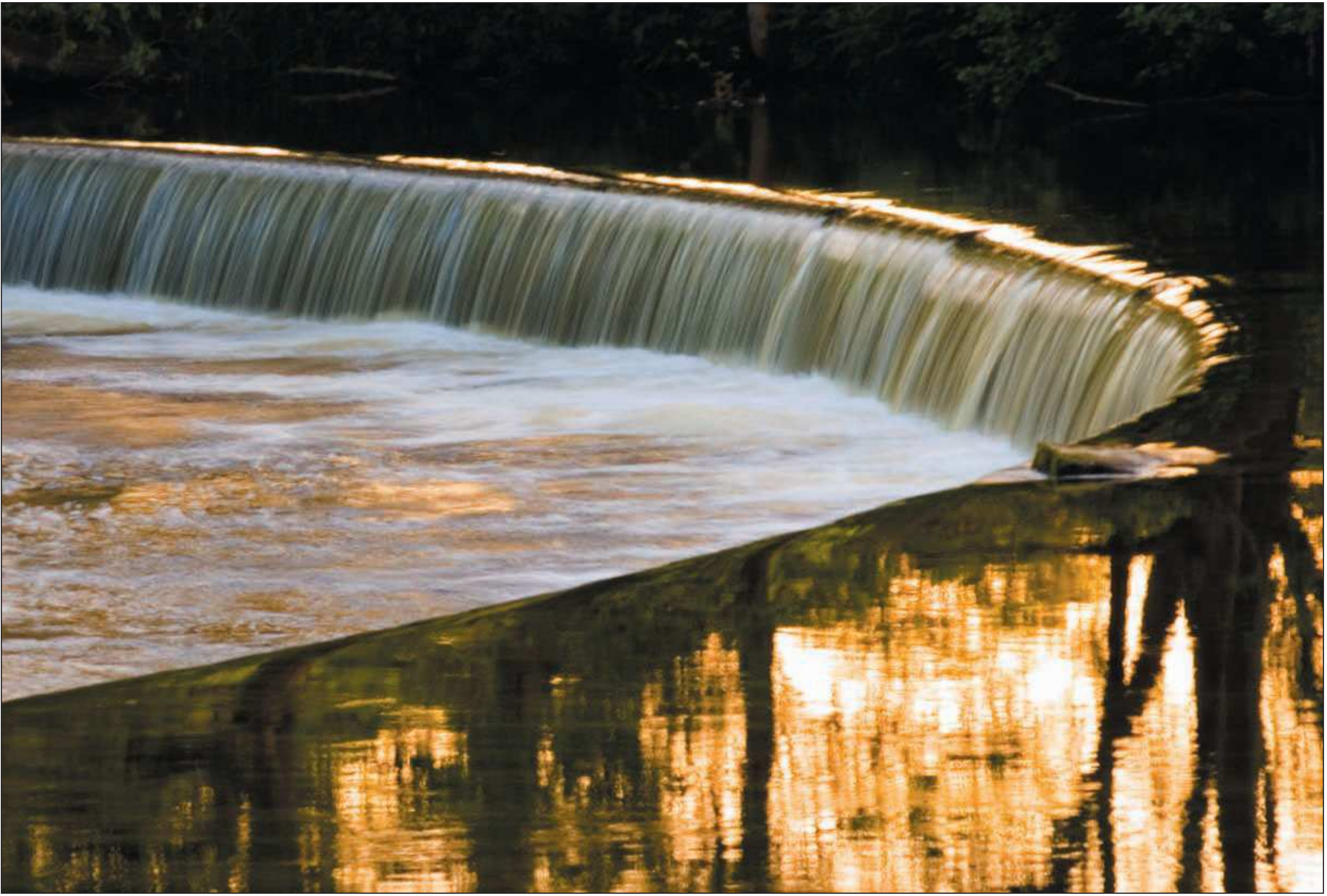
Figure 9.9 Adding a vignette to an image changes its appearance.

The Calibrate tab is for those techies who like to create their own color profile for their given digital camera. You can actually make adjustments to how your digital camera is calibrated for raw image color, and then upload that profile to your digital camera. In my experience, I've never seen a major-brand digital camera that needed any calibration. Adobe goes through great lengths to keep Camera Raw updated for the latest digital cameras and those digital camera models' color profiles. Unless you want to experiment, I suggest leaving the Calibrate tab to the geeks. (Well, I guess I'm a geek, but I only use the Calibrate tab to do goofy things to my images.)

Summary

I've personally gotten hooked on shooting all of my images in the raw. I'm not talking about taking photos without wearing clothes (though I've done that), but shooting my images in the raw file format. I get more control over the color and tonal values of my images and I get to make adjustments without having a degrading effect on the quality of my images. If you make those color and tonal adjustments in Photoshop, you do indeed degrade the image somewhat every time you make a change. In Camera Raw, the adjustments you make don't affect overall image quality. Add the ability to fine-tune white balance without having to jump through hoops in Photoshop, and I'm sold.

Lastly you'll discover, like I have, that it's actually more efficient to adjust white balance, shadows, tint, exposure, brightness, contrast, saturation, and curves in Camera Raw than it is to do so in Photoshop. I find myself more productive since I switched to raw than I was when I shot JPEGs and made similar adjustments in Photoshop.



10

Setting Up and Getting Around in Photoshop

If you're experienced with Photoshop, you might not be aware of some things that I'll be covering in this chapter. Do you know all the tools available in the Toolbox? Do you know some of the goodies hidden in the Photoshop menus? How about some of those palettes that you didn't know existed? You see, you could be a long-time user of Photoshop and not even be aware of all of its offerings. The program is so comprehensive that I bet only a handful of the Adobe programmers even know most of its capabilities. I'll be covering some of the basics of Photoshop in this chapter, and I hope to turn you on to some capabilities you didn't even know existed.

As nature photographers, we are especially interested in color, and I mean *perfect* color. I've dedicated a large part of this chapter to showing you how to set up your computer and Photoshop to make sure that whatever you visualize on your computer monitor comes out the same in output; color management is the key for successful digital photography. On the subject of color management, this chapter might be the most important part of this entire book.

I'll be covering many important concepts, so here is a review of what it means to you as a nature photographer: Setting up your digital darkroom properly will save you a lot of time and head off those digital ulcers later.

Getting Acquainted with Photoshop

Do you ever ponder how photographers are able to produce stunning nature photographs that you only dream you could create with your digital camera? You see their work every day in magazines, books, and galleries. Chances are these nature photographers process their photographs using the leading photo-editing software, Photoshop. Sure, some professionals have years of experience using image-editing software, but you would be surprised how much you can improve the quality of your own photographs by performing some basic actions using Photoshop.

I'll always preach that the key to creating beautiful nature photographs is first photographing a great image. Of course, you need a good original to begin with. It's just like when we were working in the chemical darkroom; we needed a good negative before we even began printing. Once you've taken good photographs with your camera, it's time to get them into Photoshop to finish your works of art.

Photoshop gives you all the tools you would ever need to enhance the images you've downloaded to your computer. The basic steps will help you make some simple color and tonal corrections. (They're the same basic steps as you took using Camera RAW in Chapter 9.) You'll then make adjustments to levels, curves, and color saturation.

As an analogy, think of adjusting the screen on a brand-new television when you first bring it home—you want the picture to look bright, with the right amount of color and contrast. For photographs, you can use automatic adjustments in Photoshop to make these overall corrections.

Photoshop provides you with more editing tools than you can imagine. If I'm working on a landscape photo with a power line in the middle of my deep blue sky—or worse, contrails (those streams of white mist left by jets flying across our horizons, yuck!)—I can easily use the new Spot Healing Brush or Clone Stamp tool to remove it. I'll often use the Dodge and Burn tools to lighten or darken foliage, just like I would in the darkroom.

Photoshop is invaluable to nature photographers (or any other type of photographer, for that matter) because it offers a complete end-to-end solution for getting your photos organized, adjusted, edited, and printed. Advanced photographers and professionals demand control of color throughout their workflow. Photoshop delivers with its incorporation of color management settings (the ability to control color as it appears on your monitor and match that color during the printing process) throughout the program. You can even view a preview of how a photo will appear on a particular type of photo paper loaded in your printer!

One set of features that separates Photoshop from other software is its timesaving automation tools. I like to shoot panoramas, a common type of image for nature photographers, like the image in Figure 10.1. Photoshop allows you to "stitch" these images together using the Photomerge feature. If I need to create a slideshow for a client or to show off a recent shooting trip, I use the PDF Presentation feature.

Figure 10.1 Photoshop's Photomerge feature lets photographers stitch photos together to make panoramas.

As a photographer who dates back to the old “darkroom” days of photography, I can say that Photoshop gives me everything I need to process my photos and produce better-quality prints than I could produce in my old darkroom or get from a professional photo lab. There are a lot of features available to you, and if you’re new to Photoshop, I recommend taking a little time to learn about basic image correction and editing before diving in and trying to use as many features as possible.

As of this writing, the current version of Photoshop is CS2. This version hasn’t changed as far as the basic features, but Adobe keeps adding some goodies every time they release a new version. Some of the newer features include

- **New Exposure control (Image, Adjustments, Exposure).** Photoshop now includes a new control that lets you adjust exposure outside of Camera RAW. It can be used for JPEG or TIFF images.
- **New Blur and Sharpen filters (located in the Filters menu).** CS2 provides more Blur and Sharpen tools. The Smart Sharpen filter is bound to be the new photographer’s favorite sharpening tool for photos.
- **Vanishing Point filter (located in the Filters menu).** This feature is tailored to advanced users who seek to edit images in perfect perspective.
- **Smart Objects (Layer, Smart Objects).** Using these, you can make edits to an image file while linking the image to the original. Linking to the original lets you maintain the quality of an image; your photos remain sharp even after extensive edits because the linked original remains unchanged. I’ve found that even some older, low-resolution digital images can benefit from this feature, especially those I’ve edited extensively.
- **Lens Correction filter (located in the Filters menu).** The new Lens Correction filter gives you the ability to correct lens shortcomings, such as barrel distortion and vignetting. These characteristics appear when lenses at extreme settings create slight darkened borders around an image, called *vignetting*. Also, you can see visible distortion at extreme zoom settings, especially wide angle.
- **Red Eye tool (located in the Photoshop Toolbox).** The new Red Eye tool lets you easily correct the red-eye effect that plagues so many snapshots of family and friends who really don’t want to look like insomniacs or vampires. I’ve even used the tool on some wildlife photos that were taken at night with a strobe.

- **Spot Healing Brush.** I often use this tool to rid my photos of stray beer cans that are laying around scenic vistas, especially out West. (Don't they have returnable bottles out there?) Very little can ruin a photographer's mood more than traveling a few thousand miles, taking photos of the national parks, and then viewing images that reveal litter on the ground! The Spot Healing Brush comes in handy for just those situations.
- **WYSIWYG fonts.** Photoshop now shows you exactly what the font will look like when you add text to a Photoshop document using the Text tool.

A Tour of Photoshop

If you're new to Photoshop, I probably should cover some of the basics here, such as starting the program and understanding what those little boxes are that float around the screen! First, let's just start it up. Start Photoshop from a shortcut on your desktop or choose Start, All Programs, Adobe Photoshop. On a Mac, you can put Photoshop on the Dock for immediate access.

When Photoshop starts (see Figure 10.2), you'll find that the program is divided into these basic areas:

- **The Photoshop window.** The Photoshop window will appear with the Toolbox and palettes already started. Like all computer programs, you can close, maximize, or minimize the Photoshop program window. You find these controls located in the upper-right corner of your Photoshop program window in Windows and in the upper-left corner of the window if you're using a Mac.
- **Toolbox.** The Photoshop Toolbox is located on the left side of your Photoshop window. Think of the Photoshop Toolbox as an artist's paint box; in it, you find the tools you need to edit your photos. Instead of grabbing a tube of paint or a brush, you grab photo-editing tools, such as the Marquee tool, the Paint Brush tool, the Cropping tool, the Text tool, and the Healing Brush tool, among others.
- **Palettes**. On the right side of the Photoshop program window, you find the palettes. These windows contain their own specific operations, while providing you with image information needed in the editing process. Among the most-often-used palettes are the Layers, Histogram, and History palettes.
- **Image window.** After you open an image to edit in Bridge or directly from Camera RAW (or by choosing File, Open or File, Browse), you are presented with your image window. Just like the Photoshop program window, you can close, minimize, or maximize your image window.

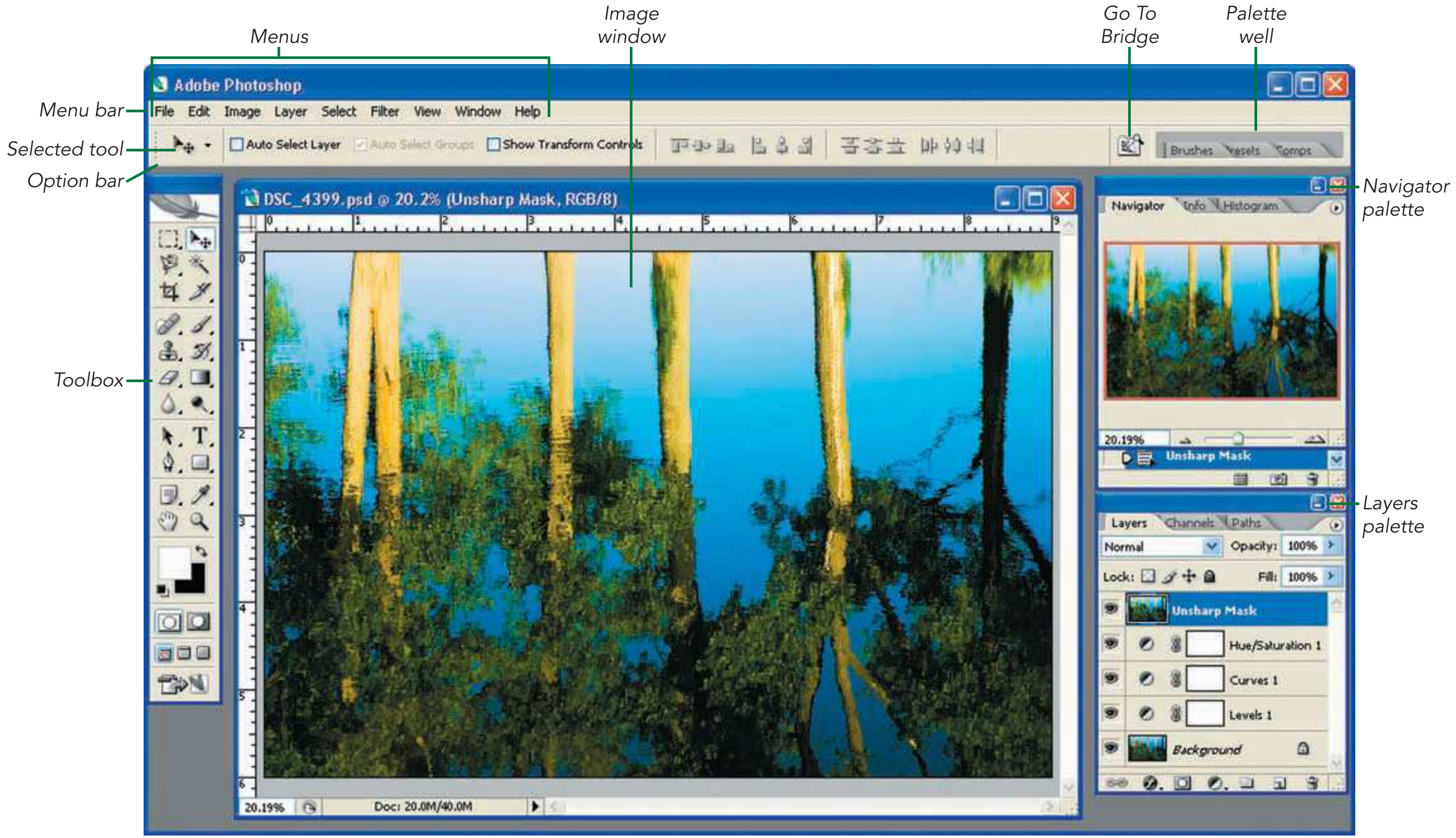


Figure 10.2 The Photoshop window

A Menu for Everything

Photoshop commands can be accessed two different ways—either through the Photoshop menus or by using keystrokes. I don't know about you, but I find myself using both. There must be hundreds of keystroke commands for performing functions in Photoshop, but I find the menu system much more intuitive, especially for casual users. I know a number of experienced users who seem like they know all of those keystrokes. (I think they need to get out a little more—you know, get away from their computers.) To be honest, if you know most of those keystrokes, you either have *way* too much time on your hands or you have a photographic memory (no pun intended!).

To make it a little less intimidating, become familiar with the commands, functions, and controls in the Photoshop menus, and you'll be on your way to becoming a Photoshop master. Let's take a quick tour of the Photoshop menus:

- **The File menu.** Shown in Figure 10.3, the File menu in Photoshop contains functions that allow you to perform image-related functions. Typical commands allow you to create a new file, open an existing file, browse files, close a file, add file information, save a file, and even access the Automate menu.
- **The Edit menu.** Commands such as Undo, Cut, Copy, and Paste are available here. Important functions, such as Color Settings and Preferences, are also available in the Edit menu, as shown in Figure 10.4.

  Photoshop's enhanced Edit menu includes a helpful command called Step Backward. Step Backward is handy when you need to reverse your steps while editing images. This command is even more helpful when you are applying enhancements using brushes, the Blur tool, or the Sharpen tool, or when you are burning or dodging.
- **The Image menu.** The Image menu holds some adjustments. Photoshop has flyout menus for Mode, Adjustments, and Rotate Canvas. As shown in Figure 10.5, the Adjustments flyout menu is where you can find common image-adjustments functions, such as Hue/Saturation, Brightness/Contrast, and Levels.

Figure 10.3 The File menu, shown with the Automate flyout menu

Figure 10.4 The Edit menu

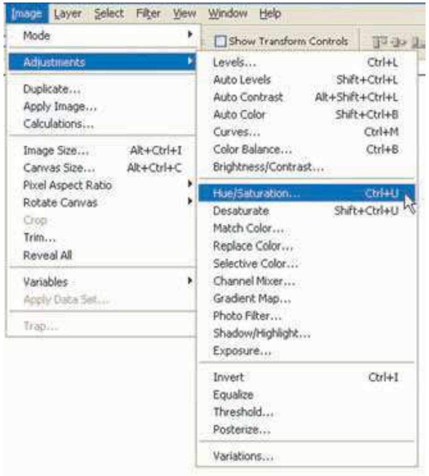


Figure 10.5 The Image menu

- **The Layer menu.** The Layer menu is where you manage your image-editing workflow. Think of layers as a stack of transparencies that make up one image. For example, if the first transparency contains your image, the second transparency might add tonal correction using Levels, the third transparency could add some contrast using Curves, the fourth might add increased color saturation, and the fifth might add sharpness. As you proceed with editing your image, each step in the process can be contained in an individual layer.

  The advantage to using layers is that they make it easy to backtrack later and make minor tweaks without undoing the rest of your image adjustments. The Layer menu is where some of the real power of using Photoshop resides, and it is what separates Photoshop from other image-editing programs.

Figure 10.6 shows the Photoshop Layer menu. Many of the functions in the Layers palette can also be executed from the Layer menu.

- **The Select menu.** Selections are some of the most challenging commands to master in Photoshop. Carefully segregating a portion of an image for adjusting or editing can be a tedious task. The Select menu (see Figure 10.7) contains the commands you use in conjunction with the Toolbox selection tools, such as the Magic Wand tool, the Marquee tools, the Pen tools, and the Lasso tool.
- **The Filter menu.** This is where the real fun starts. As shown in Figure 10.8, the Filter menu contains all the really cool processes for transforming your photo into a work of art. Other editing features, such as the Sharpen and Blur filters, also reside here.

Figure 10.6 The Layer menu

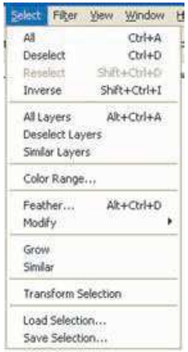


Figure 10.7 The Select menu

Figure 10.8 The Filter menu

- **The View menu.** Shown in Figure 10.9, the View menu maintains the functions that relate to how images are shown on your computer monitor. Guides, rulers, and functions to zoom in and out are all included in the View menu. Proofing setups also reside in the View menu for those who prepare images for desktop printing or even press work.
- **The Window menu.** Shown in Figure 10.10, the Window menu presents you with the wonderful world of Photoshop palettes. Palettes are small windows docked on the right side of your Photoshop window that contain specific functions relating to editing and making overall adjustments to your images. If you can't find a certain palette or even your Toolbox, just go the Window menu and select the palette to bring it back to your workspace.

Figure 10.9 The View menu shown with the Proof Setup flyout

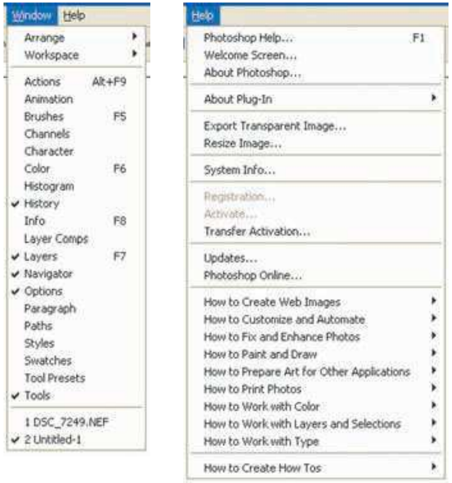
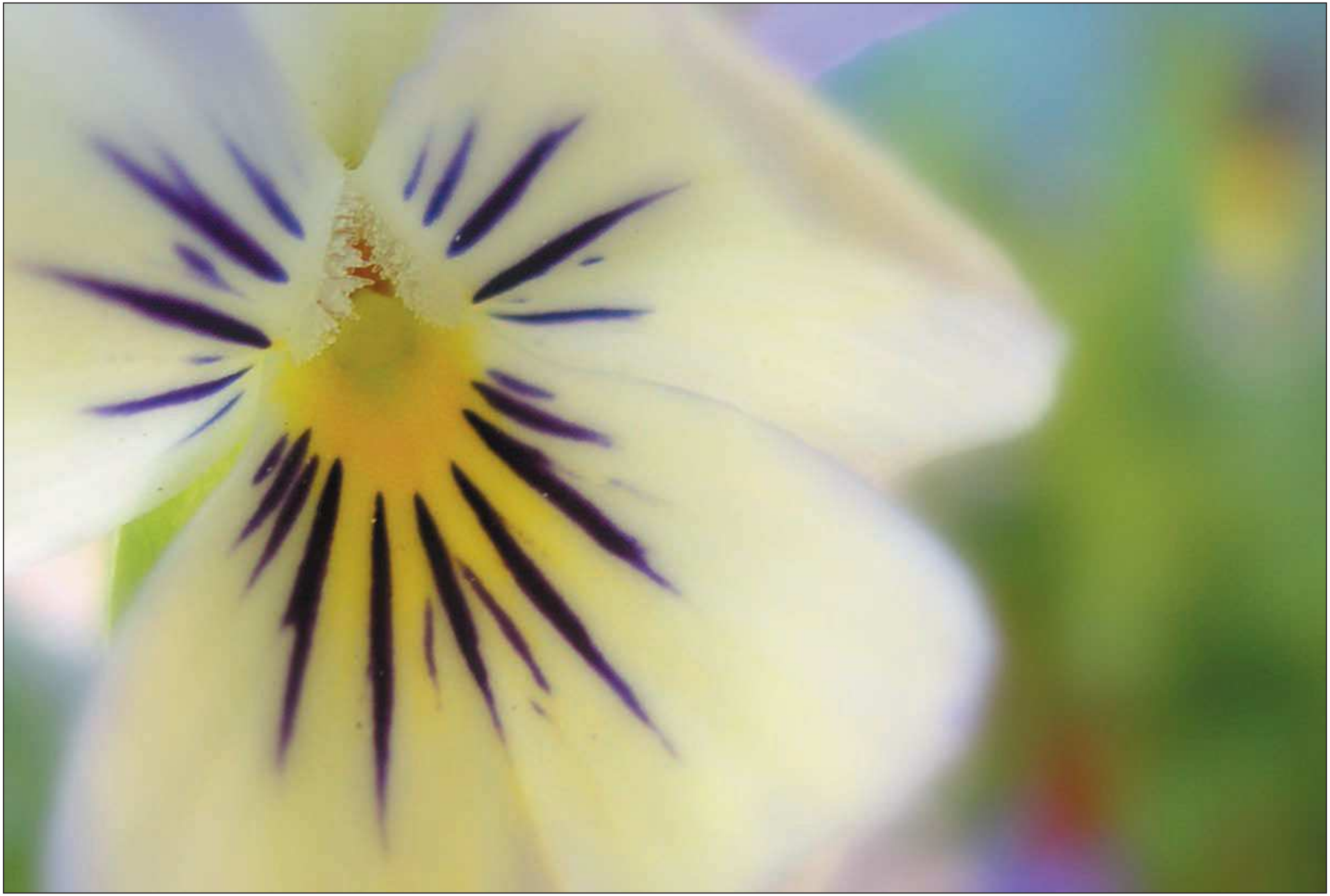


Figure 10.10 The Window and Help menus

> **TIP**
> *You can set the palettes that appear on your screen every time you start Photoshop by choosing Window, Save Workspace.*

> **TIP**
> *Need to look up your Photoshop serial number? Choose Help, System Info. This feature provides you with more system information about your computer than you probably care to know, but this information can come in handy when you are troubleshooting issues about your computer and Photoshop. Additionally, if you need to look up available Photoshop software updates, choose Help, Updates. This option takes you directly to the Adobe Web site Photoshop download section.*

- **The Help menu.** For almost any procedure you want to perform in Photoshop, you have either a reference or a tutorial available to you in the Help menu (refer to Figure 10.10). More than 50 "How To" links are in the Help menu; they link you to tutorials that are loaded on your computer when you install Photoshop. It's sort of like having a quick reference right on your computer.



The Photoshop Toolbox

Where in an art studio can you find a toolbox that contains more than 60 artistic tools you use in your everyday creations? Hint: It's only a few inches long, and it's the Photoshop Toolbox, shown in Figure 10.11. The Photoshop Toolbox provides a number of tools you use to edit images. Among the 60 or so tools offered in this window are brushes, lassos, burning and dodging tools, marquees, erasers, healing brushes, and many more.

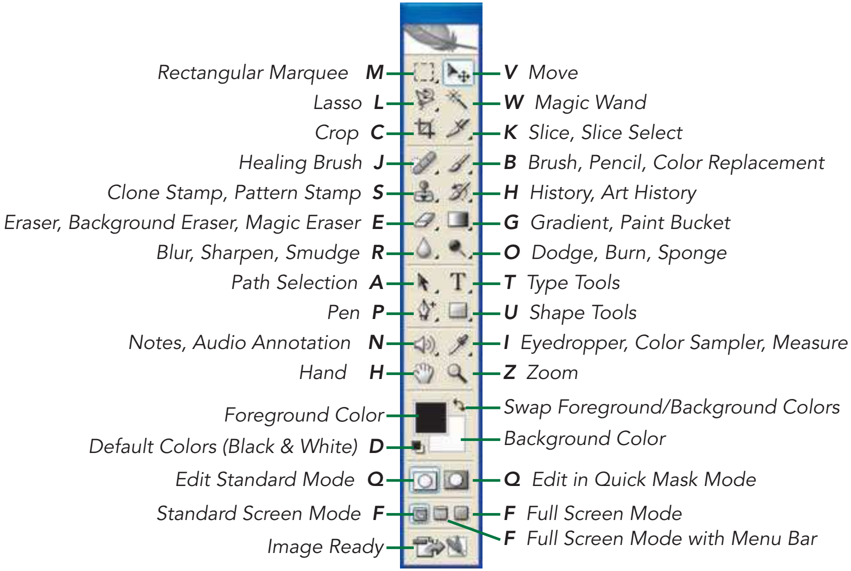


Figure 10.11 The Photoshop Toolbox

Toward the bottom of the Toolbox, you find commonly used color-selection, masking, and viewing icons. The tiny triangle at the bottom-right of an icon represents a flyout menu that contains similar tools. Right-click the icon to bring out the flyout menu for that icon.

You'll notice that whenever you click on a tool in the Toolbox, the options in the Option bar change. Photoshop provides a different set of tool controls for each tool and will display them in the Option bar. I recommend experimenting with each tool and the variations for each tool offered in the Option bar.

Palettes

One of the most powerful Photoshop features is the ability to display and hide a number of tool options and functions in the form of floating and dockable palettes. As I explained earlier when I discussed the Window menu, these palettes are accessible through the Window menu.

As shown in Figure 10.12, each palette displays as a group of tabs. When you click a tab, a function of the palette appears. For example, the Layers palette includes tabs for Channels and Paths. The Navigator palette includes tabs for Info and Histogram.

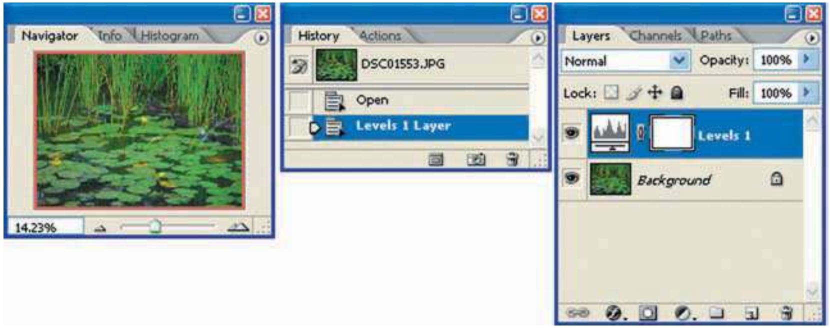


Figure 10.12 The Navigator, History, and Layers palettes

Like the Toolbox, palettes are an important part of your Photoshop feature set and they assist you in customizing your Photoshop screens. Here are some tips about palettes you might find helpful:

- Open a palette by choosing the palette name from the Window menu.
- Click the tabs within the palette to show other palettes.
- Dock individual palette tabs by dragging them to the palette well.
- Create your own palettes or break out any tab to its own palette by dragging a palette tab to the Photoshop Workspace or by dragging palette tabs to other palettes.

Working in Layers

I like to use the analogy of a big sandwich to describe the use of layers in working with images in Photoshop. I start with a couple slices of bread, or maybe three (you know, double-decker sandwiches)—the basis of every good sandwich. I then add a layer of lettuce, one of tomato, a layer of salami, and a layer of rare roast beef. Add a little layer of mustard, another layer of cheese, and I'm in heaven: a layered hero-sized sandwich. The idea is the same when you're using layers in your Photoshop images.

Like making a sandwich, editing images in Photoshop is also based on the premise of performing each individual change to an image on its own layer. Think of each layer as a transparency, and each transparency as containing a particular change. When you open an image file in Photoshop, the original image is used as a background layer. Add a layer to make an adjustment, and that layer is placed on top of the background layer. Each new edit is contained on a new layer, stacked from the bottom on up. Stack the images together, and you have a composite image: a finished product, just like my sandwich. Now I'm getting hungry!

The Layers palette, shown in Figure 10.13, contains all the layers that make up an image. You use the Layers palette to control all layers; you can create new layers, hide layers, and work with groups of layers. With all these layers, maybe we should be calling images processed in Photoshop "digital sandwiches."

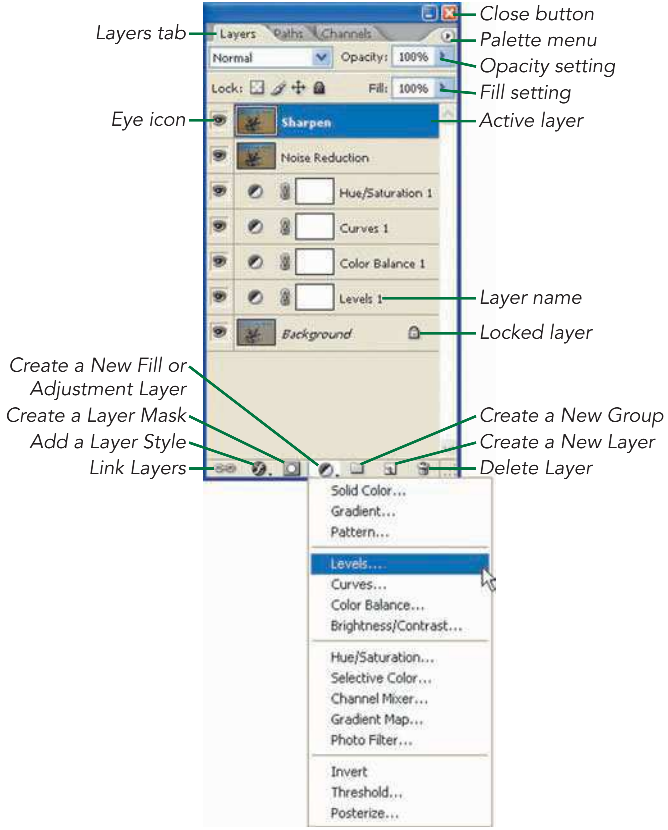


Figure 10.13 The Layers palette, shown with the Create New Fill or Adjustment Layer flyout menu

By default, the Layers palette is visible in Photoshop. If you inadvertently close the Layers palette while you're working in Photoshop, you can always start it up again by choosing Windows, Layers or by pressing the F7 key.

Following are some important facts about working in layers.

- **Background layer.** When you're opening an image file, Photoshop creates the bottom-most background layer. There are certain changes that cannot be made to the background layer in Photoshop: You cannot delete, reorder, or change the opacity or blending mode of the background layer.

> **TIP**
> *Before editing your image, always make a duplicate of the background layer. It is a best practice to not perform edits to the background layer. Reserve that layer as the original on which to base all your edits: It's your backup parachute in case anything goes wrong.*

- **To show or hide the contents of a layer, click the eye icon.** If the eye icon is visible, the contents of the layer are visible. If the eye icon is not visible, the contents of the layer are hidden.
- **Rename layers by double-clicking the layer name and typing the new name.** You want to make sure that your layers are named correctly, pertaining to the particular adjustment or edit you are making to that layer. It helps you remember what you did in that layer later if you save the file, and then go back to it days or weeks later.
- **Click and drag to change the layer order.** To change the order of your layers, click a layer and drag it to the position where you want that layer to appear.
- **Create new layers from the flyout menu.** Click the Create a New Layer button. Choose the layer type from the flyout menu. You can also create a new layer by dragging an existing layer to the New Layer button, which is located on the bottom of the Layers palette.
- **Drag to delete layers.** Click the layer and drag it to the trashcan icon located on the bottom right of the Layers palette. You can also right-click the layer and choose Delete Layer from the flyout menu. If you're using a Mac, simply select the layer in the Layers palette and press the Delete button on the keyboard.

- **Flatten layers.** Flattening layers combines all layers into one. When you flatten an image, your ability to make changes to individual layers is lost. Flattening layers is usually performed to create a version of an image to print or to submit for publishing.

  If no layers are selected, the entire image is flattened into one layer with the top layer's name. If two or more layers are selected, only those layers are combined into one layer, again taking the top layer's name.

  To maintain your image edits, save your image before flattening it and save the flattened version of your image file using another filename.

Adjustment and Fill Layers

Adjustment layers allow you to change color or tonal values of an image without affecting the original (background) image. When you create an adjustment layer, changes made in that layer are viewable along with all the adjustments you made in the layers underneath it. You can use adjustment layers to make enhancements to levels, curves, color balance, brightness/contrast, and color saturation.

> **TIP**
> *The Brightness/Contrast adjustment layer is a tempting tonal adjustment tool to use, but it is highly recommended that you use the Levels and/or Curves adjustment layer instead to adjust contrast. The Brightness/Contrast adjustment can be very destructive to your image, meaning that its usage results in the destruction of valuable pixels. You can get very good results for increasing contrast or adjusting brightness by using Levels and Curves adjustments properly. I'll explain the use of color and tonal adjustments further in Chapter 11, "Making Color and Tonal Corrections to Nature Photos."*

An adjustment layer affects all the layers beneath it in the Layers palette. The advantage is that a change made to an adjustment layer doesn't need to be repeated in the layers stacked beneath it. For example, if you want to change the brightness of an image, you only have to make that change once to the overall image.

Fill layers allow you to fill the layer with solid colors, gradients, or patterns.

The following list describes the types of adjustment and fill layers you can use in your image-editing workflow.

- **Solid color.** A solid color layer is considered a fill layer. Create a solid color layer to fill an image with a color. You can also use it to create a colored background for an image.
- **Gradient fill layer.** You can use gradients to apply a color in a transition from light to dark. They are useful for creating dark-edged vignettes for some images or for creating transitioned color backgrounds.

TIP

You can also use gradients to create some cool image special effects, and you can experiment with images by adding or reducing the opacity of the fill layer.

- **Pattern fill layer.** Create a layer containing a pattern from the Pattern menu. Adjust the layer's opacity to strengthen or weaken the pattern effect.
- **Levels adjustment layer.** This is the first tonal adjustment I make in my workflow. You can make adjustments to levels of red, green, blue, and midtones in this layer. Chapter 11 covers the procedure for using the Levels adjustment layer to make overall corrections to an image.
- **Curves adjustment layer.** The Curves adjustment layer is the second step in my overall adjustment workflow. Curves lets you make specific changes to tonality and color in an image. You can use it to complement changes made in the Levels adjustment layer. For most photos, only slight changes to the Curves grid are necessary.
- **Color Balance adjustment layer.** The Color Balance adjustment layer makes changes to color hues in an image. For most photos, these corrections are not needed if you use correct color-balance settings in your digital camera, or even better, if you make color-balance corrections in Camera Raw.
- **Brightness/Contrast adjustment layer.** As I've stated, you're better off using Levels and Curves to adjust the tonality and contrast of your images.
- **Hue/Saturation adjustment layer.** This is my favorite of them all. One of the last steps in your image-editing workflow is creating a Hue/Saturation layer and punching up the color saturation in your image to make the color in your images pop.

Implementing Color Management

We nature photographers can spend a lot of money for the gear we use for our craft. Travel costs to near and faraway vistas can also put a dent in the pocketbook. There's always the latest digital camera to buy, the next lens in our collection, memory cards, gadgets, gizmos, and outfitting gear. Believe it or not, there's something else to help drain your wallet.

If you do a lot of printing, you're constantly running to the computer store or getting on to the Web to purchase inkjet cartridges and photo paper. At today's prices, you can figure at least a dollar per 8 10-inch print, plus a lot more when you're printing up to 13 19-inch prints, like I do. Printing one series of prints can cost a lot, and if you're not using a color-managed workflow, your costs can skyrocket.

When adjusting and editing images in Photoshop, you want to make sure that the images you print on your printer match exactly the image you've been viewing on your computer's display. Otherwise, you'll be throwing money out the window every time you make a "test" print that doesn't match, not to mention the level of aggravation you have to put up with during the never-ending trial-and-error method of printing. To guarantee your sanity, you need to implement color management.

If you've been doing nature photography and printing on your own for a while, you probably already have discovered that the hardest thing to accomplish in digital photography is managing color. When you think about all the steps involved—first shooting an image with particular light in mind, then converting the raw file, then making further adjustments and edits in Photoshop, and then sending the image to a printer—it's a miracle that the final print even resembles what you first envisioned! Managing color helps you create prints that closely match what the colors should look like, as illustrated in Figure 10.14.

Processed with color management *Processed without color management*

Figure 10.14 Color management helps ensure that color remains consistent from digital camera to print.

Color management is the process of producing images with the correct color, where color is predictable throughout the image capture, editing, and printing processes. The key to ensuring that color is consistent throughout the photographic process can be summed up by the following steps:

1. **Capturing images.** This is a fancy way of saying "shooting photos." Making color-space settings in your digital camera is the first step in your color-management workflow. Digital cameras actually have a setting that determines the type of color they produce. This setting is known as *color space*. Many digital cameras operate in one color space: sRGB. sRGB is a color space intended for images to be viewed on your computer, not prints. This doesn't mean that images from most digital cameras won't make good prints; Photoshop will convert the images to any color space you choose. If your digital camera only offers sRGB as its color space, don't worry; you can always convert your files to another color space, such as Adobe RGB (1998), when you open them in Photoshop.

   If your camera has the option of setting its color space to something other than sRGB, set it to Adobe RGB (1998). Doing so will ensure that you're shooting images in the same color space used for working with photos in Photoshop that are intended for printing.

2. **Applying color settings in Photoshop**. After you install Photoshop on your computer, it isn't exactly ready to roll. You'll have a little work to do to make sure color settings are applied correctly.
3. **Viewing images on your computer monitor.** Most of your time is spent in the digital darkroom, working with images in Photoshop. The most critical element in implementing color management is calibrating your monitor. (I'll discuss profiling your monitor further in the next section.)
4. **Printing.** In effect, this is the final destination for all your efforts, and printing can be considered an art in itself. There is actually a profession for master printers. As nature photographers who process and print our own images, we need to become masters of printing as well. During the printing process, color settings need to be precisely applied so that Photoshop is able to properly convert color that will correctly be applied by the printer when producing prints.

If you apply the color-management processes described in this chapter, your prints will look more like what you originally envisioned when you were shooting your images and working with them in Photoshop. You'll save time, money, and your sanity in the process!

Calibrating and Profiling Your Display

As nature photographers, everything we do is visualized, and a key component of our visualization is our computer monitor. It's also the only device that stands between the digital camera and your final print; displaying your images accurately on your monitor is critical. Properly profiling and calibrating (adjusting) your monitor ensures that what you see is what you're going to get in your final output of the image.

The most important step in implementing color management into your workflow is calibrating your monitor. Calibrating on a regular basis is important because the colors, brightness, and contrast of your monitor change over time. Whether you use a CRT (you know, an older, clunky monitor), one of those sleek new LCD monitors, or a laptop computer, the rule remains the same: Calibrate on a regular basis.

By calibrating your monitor, you are effectively setting the stage for a successful color-managed workflow. If you skip this step, you end up making adjustments to your digital files on the basis of false information. The resulting prints won't match what you see on your monitor.

TIP

Most laptop (and some LCD) monitors won't let you adjust color balance and contrast; with some of them, only brightness can be adjusted. If you have an LCD monitor, you should still calibrate to ensure optimal brightness settings. Calibrating is important to ensure that colors are completely accurate; do as much of it as you can on your machine.

When you calibrate your monitor, you make adjustments to the brightness, contrast, and color balance to match what your calibration software uses as its standard. These adjustments are actual physical changes to the operation of the monitor (but not to the image files you are viewing). They're necessary to produce an accurate profile that your computer then uses to determine what prints out.

The best solution for calibrating your monitor is specialized software used in conjunction with a colorimeter that reads the actual color values produced by your monitor. Today's top monitor-calibration systems include the ColorVision Spyder2 or Color Plus (http://www.colorvision.com), or the Monaco Systems MonacoOPTIX and MonacoEZcolor Photo Bundle (http://www.xrite.com).

PANTONE
COLORVISION

Prices for these products vary, but if you are on a budget consider the ColorVision Color Plus. This software-and-colorimeter system offers a good value for the money for most home systems; Color Plus provides much more accurate calibration than Gamma or Colorsync for the Mac. Professional or serious photographers might opt for the more high-end ColorVision or Monaco products.

Following are some important points when using a monitor-calibration package to calibrate your monitor.

- **Know how colorimeters work.** Colorimeters read color from your monitor much more accurately than you can when you look at your monitor; they provide a precise color profile.
- **Know the available products.** All the monitor-calibration products mentioned include colorimeters that attach to LCD monitors as well as to CRTs.
- **Understand the software.** The software programs included are easy to use and provide step-by-step instructions for you to calibrate your monitor. Calibrating your monitor using any of these products isn't any more difficult than using Gamma or Colorsync on the Mac. It's easy!
- **Calibrate frequently.** Most monitor-calibration solutions automatically remind you to calibrate your monitor every few weeks. This is important because monitor characteristics change over time, so you need to recalibrate over time. Calibrating your monitor every two to four weeks is recommended.
- **Have appropriate room conditions.** Make sure the lights in the room you're working in are dimmed and the blinds are closed when you calibrate your monitor.

Setting Photoshop Color Preferences

After making sure your computer's monitor is calibrated and profiled, the next most important step in ensuring proper color management is making sure Photoshop color settings are correct and correct color profiles are assigned to your images. Believe it or not, these are the most overlooked steps for photographers using Photoshop. Making sure color preferences are correct will enable you to work in the best color environments for the different types of images you might produce, including images for prints, screen, or media publishing.

If most of your work involves preparing images for the Web, for printing, or for publishing, each of those tasks will need a different color setting. The first step after calibrating your monitor (see the previous section) is to set up your default color settings in Photoshop. Following are the steps to do so.

1. **Access Color Settings.** Choose Edit, Color Settings or press Ctrl+Shift+K (Cmd+Shift+K on the Mac) to bring up the Color Settings dialog box.
2. **Click the More Options button.** This expands the Color Settings dialog box so you can see all the options, as shown in Figure 10.15.

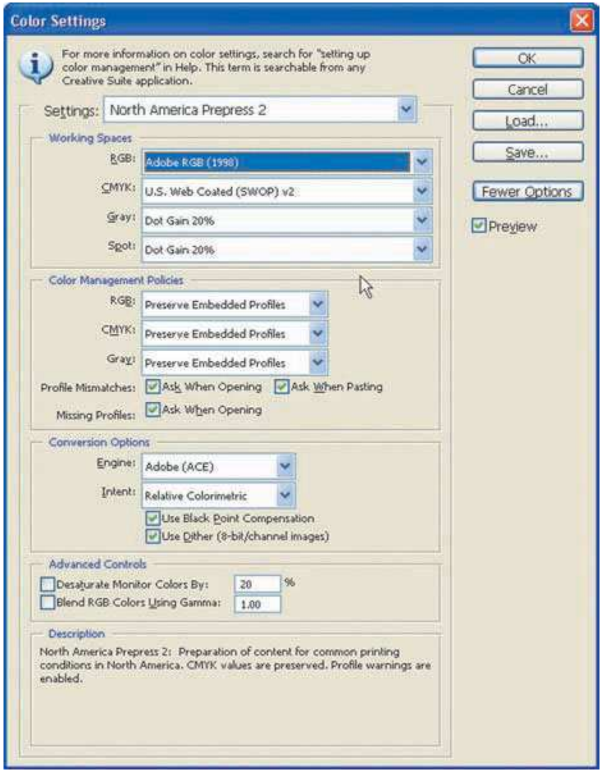


Figure 10.15 The Color Settings dialog box

3. **Choose overall settings.** From the Settings drop-down list at the top, choose North America Prepress 2. The default for Settings is North America General Purpose 2, which isn't very good for photographers. North America Prepress 2 works best for photographers.
4. **Set the working spaces.** Change the Photoshop default for the RGB working space to Adobe RGB (1998). Adobe RGB (1998) is the best working space for photographers, providing the widest color gamut for color saturation. Make sure to leave CMYK, Gray, and Spot selections to their defaults. For most of your image editing, use Adobe RGB (1998) to edit your master images. If you need to, you can convert to the sRGB working space for the final output of Web images.
5. **Set color management policies.** Make sure to leave RGB, CMYK, and Gray set to Preserve Embedded Profiles. This ensures that color settings are maintained in images you open in Photoshop. Leave the three Profile Mismatches and Missing Profiles check boxes selected. These settings ensure that you're prompted to choose a color space to apply when you open an image in Photoshop that doesn't match your default working space.
6. **Set conversion options settings.** I recommend leaving the defaults for these settings to Adobe (Ace) for the Engine and Relative Colorimetric for the Intent. The Engine setting controls Photoshop methods used for converting colors from one profile to another. The Intent setting specifies what you want the rendering to accomplish for conversions from one profile to another. Adobe (Ace) and Relative Colorimetric are optimal conversion settings for photographs. When editing photographs in Photoshop, you get the best results by leaving the defaults (Use Black Point Compensation and Use Dither) selected. This option ensures that the black point of your image matches the black point of your print (or output). I normally leave the advanced controls set to their default settings of *not* selected.
7. **Click OK.** This will save your color settings.

Assigning Color Profiles

The final step to ensuring proper color management throughout your process is to make sure that the images you open in Photoshop contain the correct color profile you've set up in the Color Settings dialog box. When you open an image that doesn't match that default color space, you're prompted with the Embedded Profile Mismatch dialog box, shown in Figure 10.16.

Figure 10.16 The Embedded Profile Mismatch dialog box

In this dialog box, you can choose one of three options:

- **Use the Embedded Profile.** Select this option if you want to leave the image's working space as is. Remember that if you leave this option selected, you won't be working in the default color space you indicated in the Color Settings window.
- **Convert Document's Colors to the Working Space.** Select this option if you want to use your default color space. This is recommended for most images.
- **Discard the Embedded Profile.** Select this option if you don't want to use a color profile for the image.

Sometimes when you're working on an image in Photoshop, you need to convert the image to another working space to obtain the best color for your intended output. To get the best color space, first edit your images in Adobe RGB (1998), and then convert them later to meet your specific output needs. The combination of using monitor profiles (explained earlier in this chapter in the section on calibrating your monitor) and assigning color profiles will ensure an optimum color-management workflow.

The process to assign a color profile to an image is as follows.

1. **Open Assign Profile.** Choose Edit, Assign Profile. The Assign Profile dialog box will appear.
2. **Select the Working RGB option.** Figure 10.17 shows Working RGB set to Adobe RGB 1998. Use the Don't Color Manage This Document selection only if you might need to submit your images to a lab or publisher and you don't know how they will color manage your images.

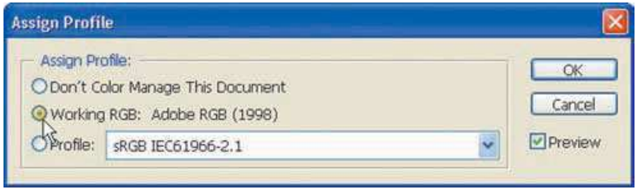


Figure 10.17 The Assign Profile dialog box

3. **Select a profile.** Select another profile from the drop-down list provided by the third option if you desire. This choice is rare for most photographers, but you can use this option to assign a specific profile. For example, a printing company for press services might have supplied you with a required profile. You might also want to convert an existing image to sRGB if you are going to save a version of the image for viewing on the Web, but I usually use the File, Save for Web command for that.

> **TIP**
> *For most photographs, you want to select the Working RGB option, the same option I recommend you choose in the Color Settings dialog box as your default working space.*

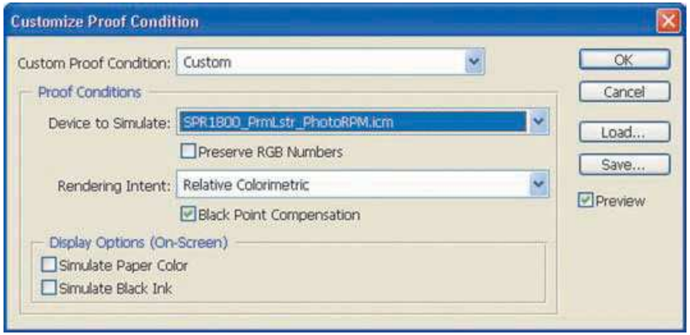
Proofing

After making color settings in Photoshop and calibrating your monitor to give your computer a good profile to set your display to, you're ready to get into your color-managed workflow. When working with images, it's important to proof the images to make sure that what you're viewing on your monitor closely matches the type of output you intend for the image. Proofing is what all the information in this chapter is about—making sure what you see on your monitor will be sent for output looking the same.

Proofing is actually a pretty simple process. First, you need to set up your proofing profile to match the exact output for which your image is intended. When I use the term "output," I'm referring to a printer, a specific type of paper you're using in the printer, or even output intended for viewing on the Web or a PDF presentation. Turn on proofing in Photoshop so the image you're working with is simulated as viewed on your monitor and what you're seeing closely matches what should be printed.

Following are the steps to proofing in Photoshop.

1. **Open the Customized Proof Condition dialog box**. Choose View, Proof Setup, Custom.
2. **Select a profile to simulate your intended output on your monitor.** In the Customize Proof Condition dialog box, select the output profile of the printer and/or paper combination, and then click OK. Figure 10.18 shows the Customize Proof Condition dialog box with the Epson R1800 Velvet Fine Art paper profile selected. I chose that selection because that is the particular printer and paper combination I use. Your printer and paper combination will probably be different.



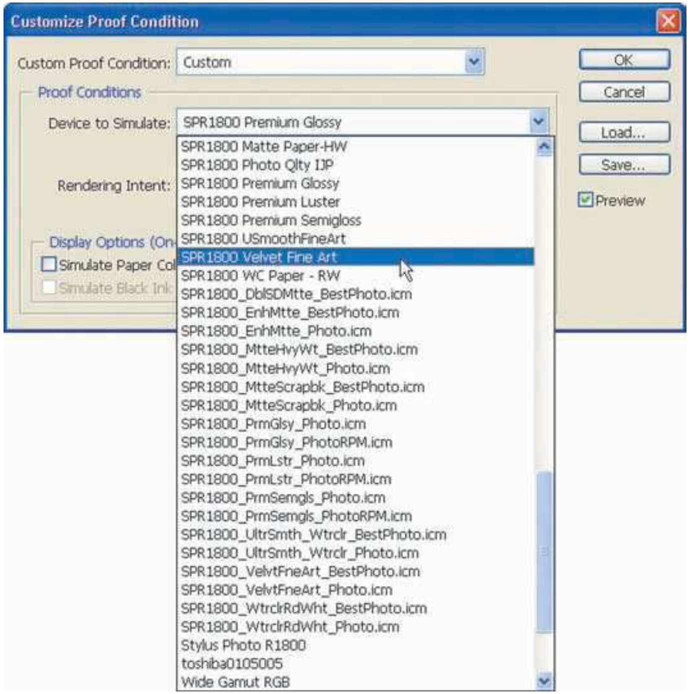


Figure 10.18 The Customize Proof Condition dialog box

3. **Turn on proofing.** You can toggle Proof Colors on by choosing View, Proof Colors or pressing Ctrl+Y (Cmd+Y on the Mac). Selecting the profile doesn't change your monitor display, which is why you must perform this step to get the right results. To view the difference between how your image looks onscreen and how it should look when you toggle Proof Colors on and off, press Ctrl+Y (Cmd+Y on a Mac) to toggle proofing on and off. When Proof Colors is on, the image you're viewing on the monitor should closely match what should be printed.

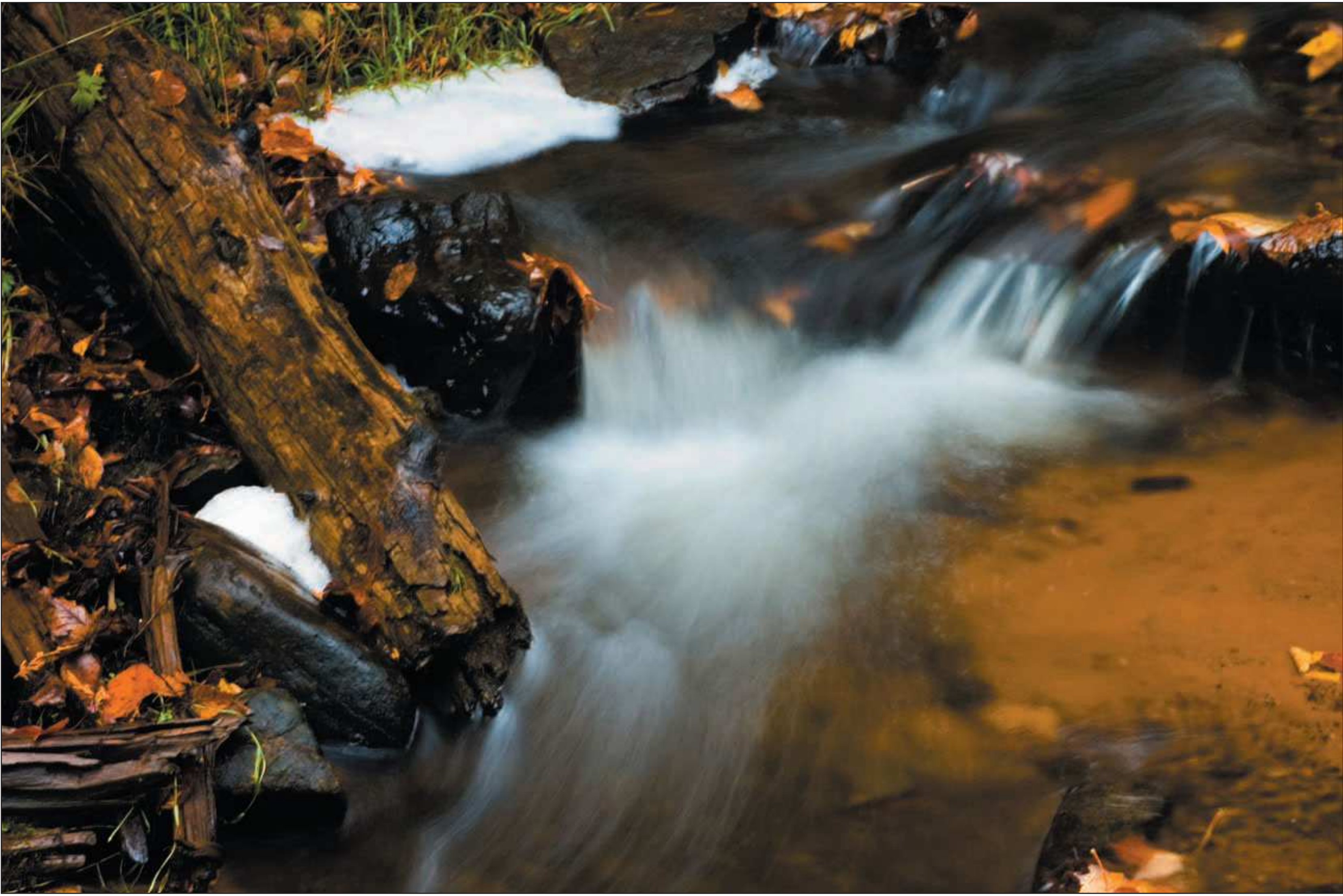
Summary

I've thrown a lot of information at you in this chapter, but it's all important to guarantee the utmost quality. Knowing how to navigate Photoshop's menus, palettes, and the Toolbox is the key to being comfortable working with Photoshop. Implementing a color-management workflow is the most important step you can take to ensure your nature photographs are going to match what you envisioned.

In writing and teaching Photoshop concepts to many, I've learned that if you practice and master the Photoshop navigation, then implement a color-management workflow, you have 80 percent of the digital darkroom knowledge. The rest—making overall corrections and editing images in Photoshop—will be a breeze.

To review, following are the skills you need to be successful processing your nature photos in Photoshop.

- **Become comfortable navigating Photoshop.** The first step is becoming familiar with Photoshop menus and all the functions and commands those menus contain.
- **Get to know the tools available in the Toolbox.** Like a painter, you need to have all of your painting stuff handy, know what these tools are, and know where you can use them.
- **Take advantage of what palettes have to offer.** Photoshop palettes provide you with a slew of tools you can use when processing your images. The most important palette is the Layers palette.
- **Implement a color-management workflow.** By applying the correct color settings in Preferences, assigning profiles, and proofing, you've guaranteed yourself an efficient work environment to process your images. What you'll see on your screen is what's going to pop out of your printer, saving you a ton of money in paper and tranquilizers.



11

Making Tonal and Color Corrections to Nature Photos

I've been stressing throughout the book the need to process your images in a step-by-step manner, a workflow. One of the first steps I showed you to work toward this goal was to review the image in Camera Raw. Although the goal in making overall adjustments in Camera Raw is to reduce the sheer number of overall adjustments needed in Photoshop, there is still much creative work to do! Photoshop is actually where you take the steps to complete the adjusting and editing of your image. Heck, you might not even be shooting your images in the raw format, so Photoshop is the place where all of your tonal and color adjustments will need to be made.

In this chapter, I'll show you in detail the workflow for making tonal and color corrections in Photoshop. The following overview of this workflow summarizes the steps for making quick tonal and color adjustments and edits to an image.

1. **Open an image in Photoshop.** If your image is in raw format, using Bridge, open an image in Camera Raw, make adjustments, and then click the Open button. The image will open in Photoshop. If the image is in JPEG or TIFF format, browse the image thumbnails and double-click on an image to open it directly in Photoshop.
2. **Save the image as a PSD file.** After you open an image in Photoshop, the file is still in the digital format native to the camera that took the picture. For example, if you took the image in raw format and converted it in Camera Raw before opening it in Photoshop, the image would still be in the raw format taken, such as .NEF for a Nikon digital camera or .CR2 for a Canon model. Saving the image to another folder in Photoshop format is the best method for keeping your images organized and your original image preserved.

   Select File, Save As or press Shift+Ctrl+S (Shift+Command+S on a Mac). The Save As window, shown in Figure 11.1, gives you the choices to select a folder, change the filename if you choose, and most importantly, change the file format. Select the folder to which you want to save your working file, and then click the Format selection box to select Photoshop (*.PSD, *.PDD) as the file format. Click the Save button to save your working file.
3. **Duplicate the background layer.** As you've discovered, I'm a stickler for making backups and protecting original files…and *layers*. As discussed in Chapter 10, images are adjusted and edited in separate layers. When you open an image, all the image information is contained in the background layer. You should create a new layer to contain every color adjustment, tonal adjustment, and edit separately. By creating separate layers, you ensure that you can always go back to that particular layer and make changes without affecting the other layers. You can also delete a layer if you don't like an

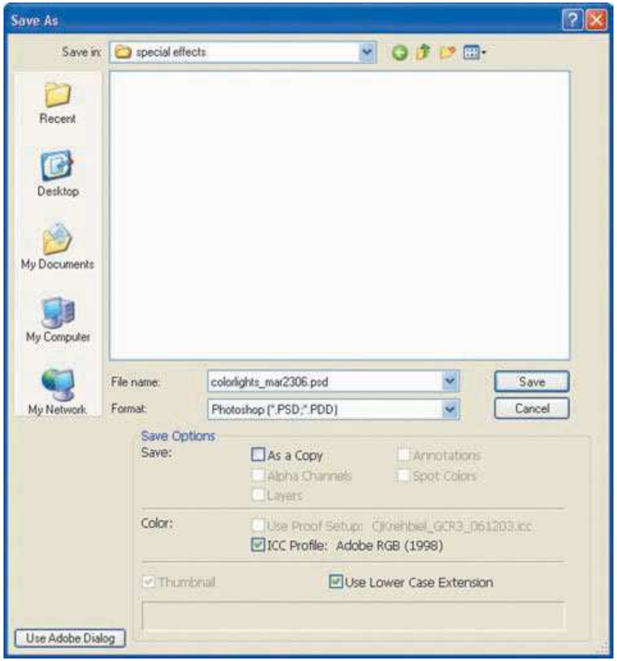


Figure 11.1 The Save As window

adjustment you made, and then keep the original image intact. When you've finished making changes to your image, you'll have a number of layers, each with its own adjustment or edit.

Backing up the original background layer is just my particular best practice for protecting the background layer. To back up and protect the original background layer, choose Layer, Duplicate.

4. **Evaluate the image and formulate a plan of attack.** Before diving in and beginning to make adjustments and edits to an image, I always sit back and view it first, evaluating the image. This important step ensures that you are making a plan of attack for the image.

TIP

One tool offered by Photoshop is Variations. Variations is found in the Image, Adjustments menu and can be a very useful tool in helping you evaluate your image. Variations, shown in Figure 11.2, allows you to make changes to an image's shadows, midtones, highlights, and saturation by viewing different variations of the image and clicking on those variations to make changes. As a nature photographer, I like Variations because it gives me a visual cue for what changes I might want to make during my color and tonal adjustments. However, I usually don't use Variations to make my changes, just to view different possibilities.

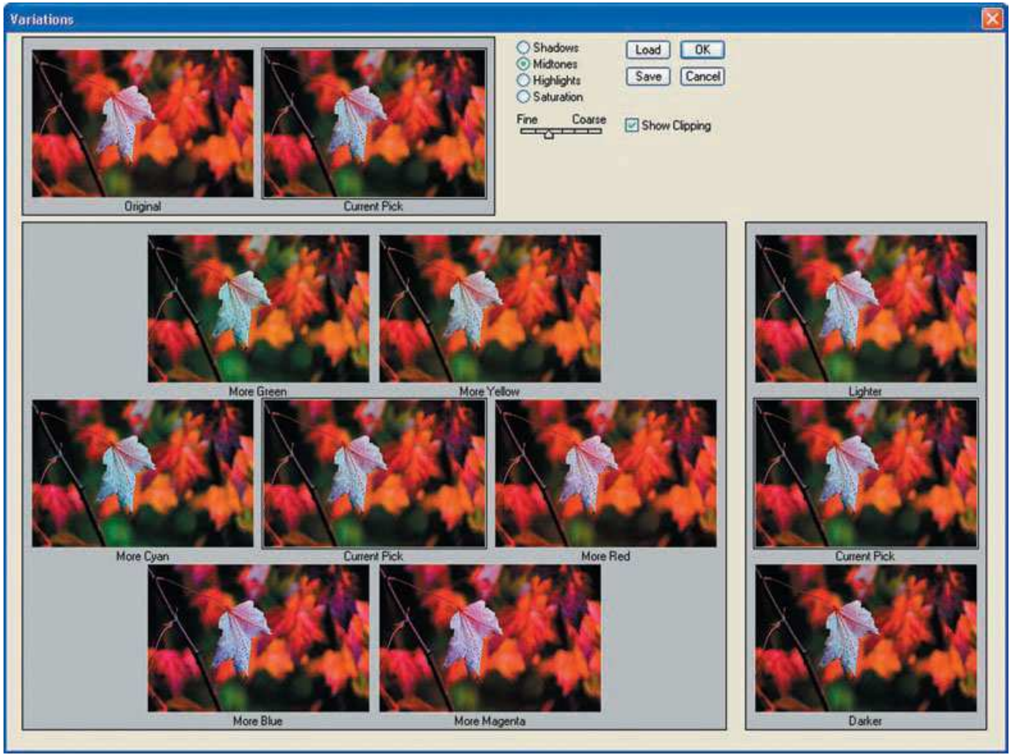


Figure 11.2 Using Variations to help evaluate an image

5. **Correct the exposure.** A recent addition to Photoshop with the release of CS2, the Exposure adjustment (Image, Adjustments, Exposure) gives you the ability to correct JPEG or TIFF images that are overexposed or underexposed. If you shoot and process raw images, you won't need to take this step. The Exposure adjustment in Camera Raw is non-destructive and is a better adjustment to use, but only if you shoot raw images. If your image is a JPEG or TIFF that is in need of exposure correction, consider using the Exposure adjustment to make changes.
6. **Adjust shadows.** Another addition to Photoshop with the release of CS2 is the Shadows adjustment (Image, Adjustments, Shadows). Like the Exposure adjustment, if you shoot and process raw images in Camera Raw, you won't need to use the Shadows adjustment in Photoshop.
7. **Create a Levels adjustment layer.** The first step in my overall adjustments is adjusting levels. Levels adjustments make corrections to the tonal values of an image by fine-tuning the colors in the highlights, midtones, and shadows.

   You can create adjustment layers by clicking on the Create New Fill or Adjustment Layer icon that's located on the bottom of the Layers palette, and then choosing which type of layer to create.
8. **Create a Curves adjustment layer.** To avoid using the Brightness/Contrast adjustment layer to increase or decrease the contrast in an image, I strongly recommend you use the Curves adjustment layer to make fine adjustments to contrast and the tonal values in an image. Using Curves is much less destructive than using the Brightness/Contrast adjustment and it allows for adjustments on up to 14 points of the tonal range of an image.
9. **Create a Color Balance layer.** You only need to do this if your white balance is out of whack for your image, especially if the original wasn't processed in Camera Raw.
10. **Create a Saturation adjustment layer.** My favorite adjustment can be found in the Saturation layer. Saturation allows you to increase color in your image. To make your images "pop" with some color, click the Create New Fill or Adjustment Layer button on the Layers palette and choose Hue/Saturation.
11. **Save the image.** After making adjustments, save the image by choosing File, Save or by clicking the Save button on the Option bar.

Correcting Exposure

If you've followed the steps I just described by opening an image in Photoshop and then duplicating the background layer, you're ready to make any exposure corrections that might need to be done to your image. As you recall, Camera Raw has a great exposure adjustment, but not all of us shoot in the raw format. If you need to make a correction to an underexposed or overexposed image, follow these steps:

1. **Open the Exposure adjustment.** Choose Image, Adjustments, Exposure. The Exposure Adjustment window, shown in Figure 11.3, will appear.
2. **Adjust the exposure.** The image shown is underexposed by about a half stop. Using the Exposure adjustment, you can increase the exposure by moving the slider slightly to the right. You'll notice that you don't have to move the slider far to get results.

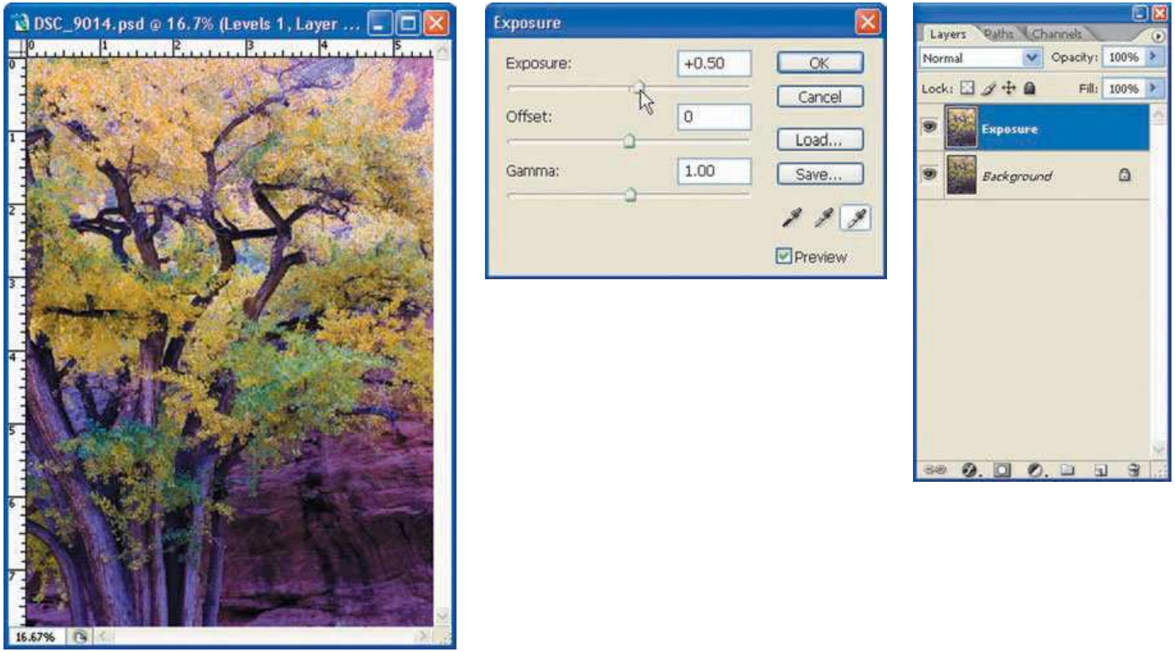


Figure 11.3 The Exposure adjustment and the Layers palette

3. **Adjust the offset.** The Offset slider will change the shadow areas of the image without affecting the highlights. In real-speak, this means you can increase the contrast (darken it) by moving the slider slightly to the left, and you can decrease the contrast by moving the slider slightly to the right. Again, you only have to move the slider in small increments to make any change to the image. I usually leave this adjustment set to its default.
4. **Adjust the gamma.** Gamma is an adjustment to the midtones of the image. I rarely use this slider in the Exposure adjustment, but you can experiment with your results by moving the slider slightly to the left to decrease the gamma or slightly to the right to increase the gamma of the image.
5. **Click OK.** To save your changes, click the OK button, or click the Cancel button if you would rather not use the changes made with the Exposure adjustment.

TIP

To compare the changes you've made to the exposure, select and deselect the Preview check box. If you like the version of the image without the Exposure adjustment, just click Cancel.

Adjusting Shadow/Highlights

The Shadows adjustment (Image, Adjustments, Shadows) lets you lighten or darken the shadow areas of an image. I'll often use it to darken backgrounds, such as in photos of foliage where I want fall color in the leaves to stand out against a darker background. When I'm shooting raw, I'll use the Camera Raw Shadows adjustment, but if you're shooting JPEG or TIFF images from your digital camera, you'll want to give the Photoshop Shadows adjustment a whirl.

To adjust shadows in Photoshop:

1. **Create a new layer.** Because the Shadows adjustment isn't an option on the Create New Fill or Adjustment Layer button in the Layers palette, you can simply right-click on the background layer and choose Duplicate Layer to duplicate the background layer. Make sure you name the layer Shadows, like in the Layers palette shown in Figure 11.4. If you have already made some adjustments, you can create a new layer that combines all the previous layers into one by pressing Shift+Ctrl+Alt+E on your PC or Shift+Command+Option+E on a Mac.

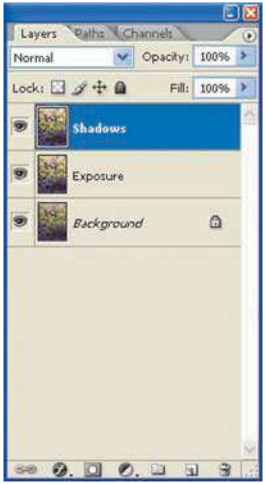


Figure 11.4 Creating a Shadow/Highlights layer

Figure 11.5 Adjusting Shadow/Highlights

2. **Adjust Shadow/Highlights.** The Shadow/Highlight window, shown in Figure 11.5, shows the Shadows slider and the Highlights slider. You can check the Show More Options box in the lower-left corner of the window to view more options. I rarely ever use them, but you can experiment with the more advanced options.

   Move the Shadows slider to the left to darken the shadow areas of the image, or move the slider to the right to lighten the shadow areas of the image. My goal was to correct the exposure in the shadow areas while adjusting highlights in this image to compensate for some overexposed areas at the top of the tree. If you noticed, the image has a nasty magenta cast. I'll be correcting that later in the workflow.

3. **Click OK.** If you don't want to save your changes (this can be a complex adjustment, so sometimes you won't want to save your changes), just click the Cancel button.

Levels Adjustment Layer

Creating a Levels adjustment layer is often the first step I take after opening raw files in Photoshop. The Levels adjustment makes corrections to the tonal values of an image by fine-tuning the colors in the highlights, midtones, and shadows. If I'm processing a raw file in Camera Raw, I have already adjusted white balance, exposure, and shadows. My next step is creating a Levels adjustment layer. If I'm processing JPEGs or TIFF images, this step might come after Exposure or Shadow/Highlights.

1. **Create a Levels adjustment layer**. Click the Create New Fill or Adjustment Layer button located on the bottom of the Layers palette, as shown in Figure 11.6.
2. As shown in Figure 11.7, the Levels adjustment window shows you a graphical representation of the color distribution (red, green and blue channels) of the image, also referred to as the *histogram*. Below the histogram are three sliders.

   The slider on the left controls the shadow portions of the image, the middle slider controls the midtones (also called the *gamma*) of the image, and the slider on the right controls the amount of color in the highlight areas of the image.

   With the default channel set to RGB, move the left and right sliders to the point of the histogram at which pixels begin to show up clearly. Moving the middle slider to the right increases contrast in the image by darkening the highlight areas. Experiment with moving the sliders until you get the result you want. Don't forget to have the Preview box checked!

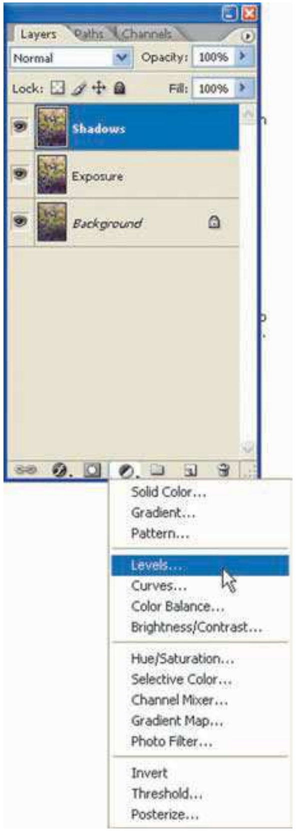


Figure 11.6 Creating the Levels adjustment layer

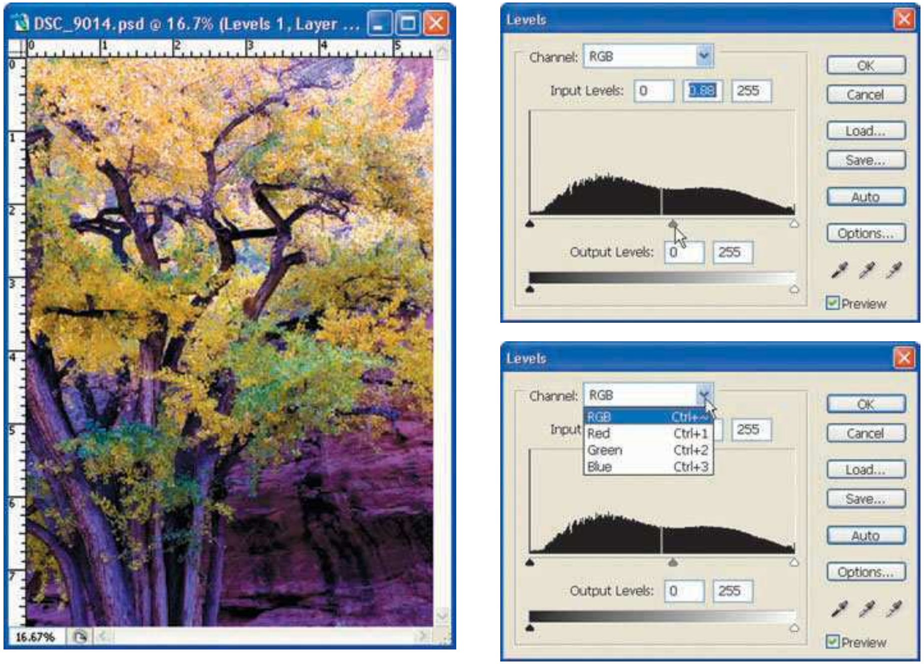


Figure 11.7 The Levels adjustment window

3. **Select a channel.** Keep the channel selection as RGB so you can correct levels for the entire image (all three color channels—Red, Green, and Blue) at the same time.

   As you become more familiar with adjusting levels in Photoshop, experiment with changing the channel selection to the Red, Green, or Blue channels and adjusting them individually. If you are a new user of Photoshop, keep the RGB Channel selected.

4. **Adjust the shadows.** View the histogram and slide the Shadows input slider (the one on the left) to the right until it gets to where the curve begins to appear in the histogram.

   With Preview selected, you can view the image changes as you move the slider.

   A histogram provides a snapshot of the tonal range of an image. The histogram shows how much detail is in the shadow area on the left, in the midtones in the middle, and in the highlights on the right.

   Histogram data is different for every image. For many images, the histogram curve begins all the way to the left, where no Shadow input-slider adjustment is needed.

5. **Adjust the highlights.** Slide the Highlights input slider (the one on the right) to the left until it gets to where the Highlights curve begins.

6. **Adjust the midtones.** Move the Midtones input slider (the one in the middle—this is the one you'll use most) to the right slightly, checking the image for improved color saturation and contrast. You can often improve the appearance of an image by using the Midtones slider to darken the midtones.

7. **Click OK to complete the Levels adjustment.** If you are not satisfied with the effects of your Levels adjustment, just click on the Cancel button.

Figure 11.8 Creating a Curves adjustment layer

Curves Adjustment Layer

When you adjust the tonal range of an image using Levels, you make only three adjustments: shadows, midtones (gamma), and highlights. The Curves adjustment allows for up to 14 different points of adjustment throughout the tonal range. Make a habit of using the Curves adjustment to finish any fine-tuning of tonal adjustments.

To adjust an image's tonality and increase some contrast at the same time using the Curves adjustment layer, follow these steps:

1. **Create a Curves adjustment layer.** Click the Create New Fill or Adjustment Layer button in the Layers palette and then choose Curves, as shown in Figure 11.8.

2. **Increase the grid lines.** Increase the number of grid lines to provide a more precise grid. Press and hold the Alt key (the Option key on the Mac) while clicking inside the Curves grid to increase the number of grid lines. Figure 11.9 shows the Curves grid with increased grid lines.

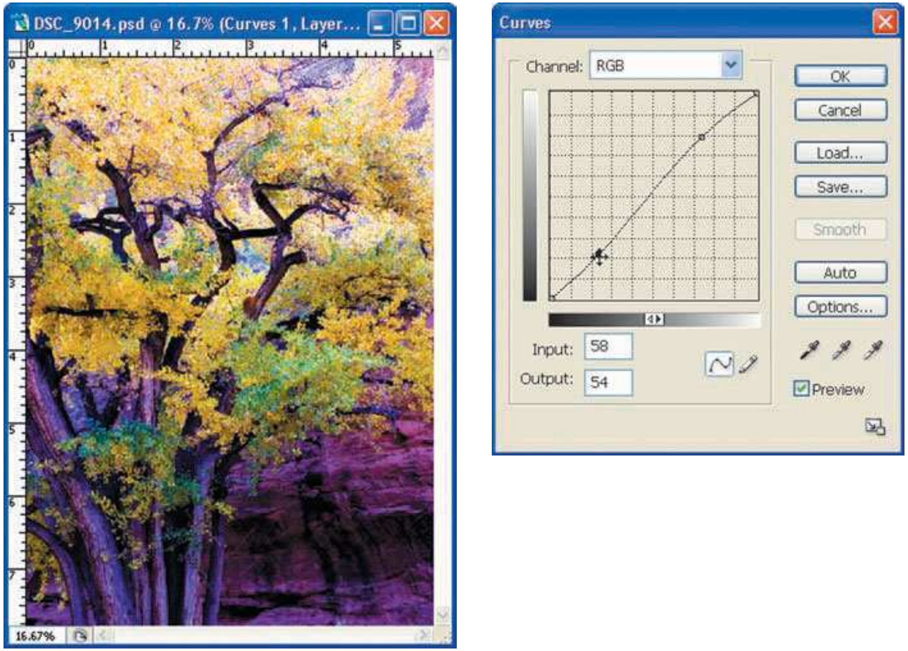
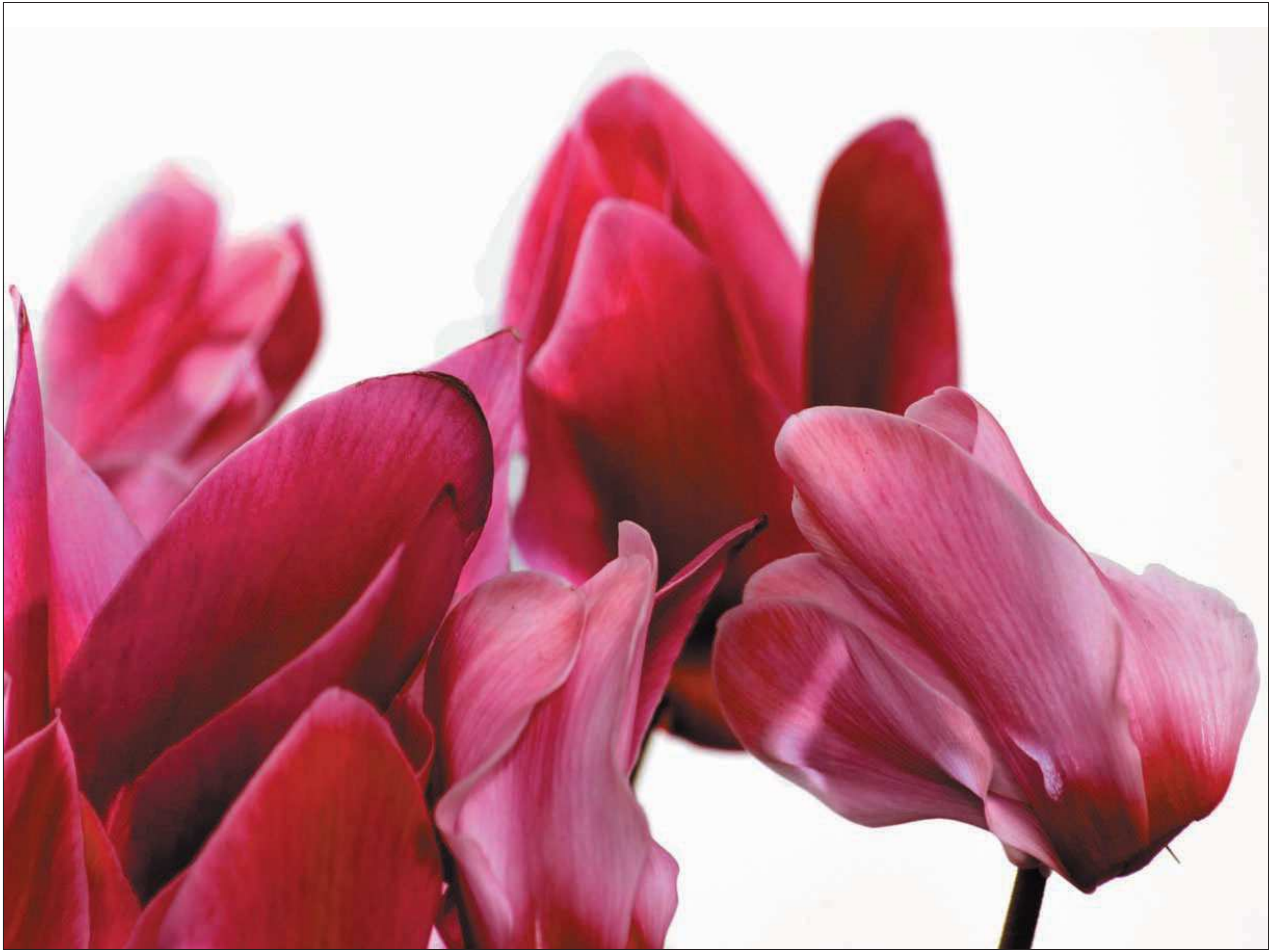


Figure 11.9 The Curves adjustment window

3. **Make tonal adjustments.** Click on a point of the curve line and drag it to the desired grid point or click Auto. To adjust the highlight areas of the image, drag the curve line that is closer to the top-right of the grid. To adjust the shadow areas of the image, click and drag the curve line at the bottom-left of the grid. Drag the curve upward and left to brighten, downward and right to darken. Experiment with creating adjustments for shadows, midtones, and highlights. I find that creating a slight S curve works best for most images.
4. **Click OK to save your changes.** If you don't like the results of using the Curves adjustment, just click the Cancel button, and the layer will not be created.



Color Balance Adjustment Layer

Now is the time to get rid of that nasty magenta color cast in our tree photo. The rock that appears in the background should be more red, and the tree is too blue. Normally, I would have eliminated this color cast in Camera Raw using the White Balance adjustment (the image was shot with an incorrect white balance, which makes for a good example, don't you think?), but if you're shooting JPEG or TIFF, you don't have the luxury of that adjustment; there isn't one in Photoshop.

The Color Balance adjustment accomplishes changes to color in your images like we used to in the chemical darkroom. When making prints with a color enlarger, we had to manually insert color filters consisting of cyan, magenta, yellow, red, green, and blue. Depending on the combination of filters you used in the enlarger, you were able to somewhat control the color output of the print. These adjustments are automatically made when you take rolls of film to the corner store to be developed on their expensive computerized equipment (either in-house or sent out). The Photoshop Color Balance adjustment gives the photographer finer control over color than any computer adjustment can calculate; our own eyes give us more of an interpretive understanding of color than any computerized whiz-bang machine ever could.

Figure 11.10 Creating a Color Balance adjustment layer

To make color correction using the Color Balance adjustment:

1. **Create a new Color Balance adjustment layer.** Click on the Create New Fill or Adjustment Layer button on the Layers palette, as shown in Figure 11.10.
2. **Make color adjustments.** This is the fun part. Remember how I mentioned in Chapter 9 that making white balance adjustments is a lot easier in Camera Raw than in Photoshop? This is the part where you'll need just a little practice balancing your color in other types of images. The Color Balance adjustment gives you three sliders (see Figure 11.11)—the Cyan/Red, Magenta/Green, and Yellow/Blue sliders. By judging the test image we've been using throughout this chapter, I've

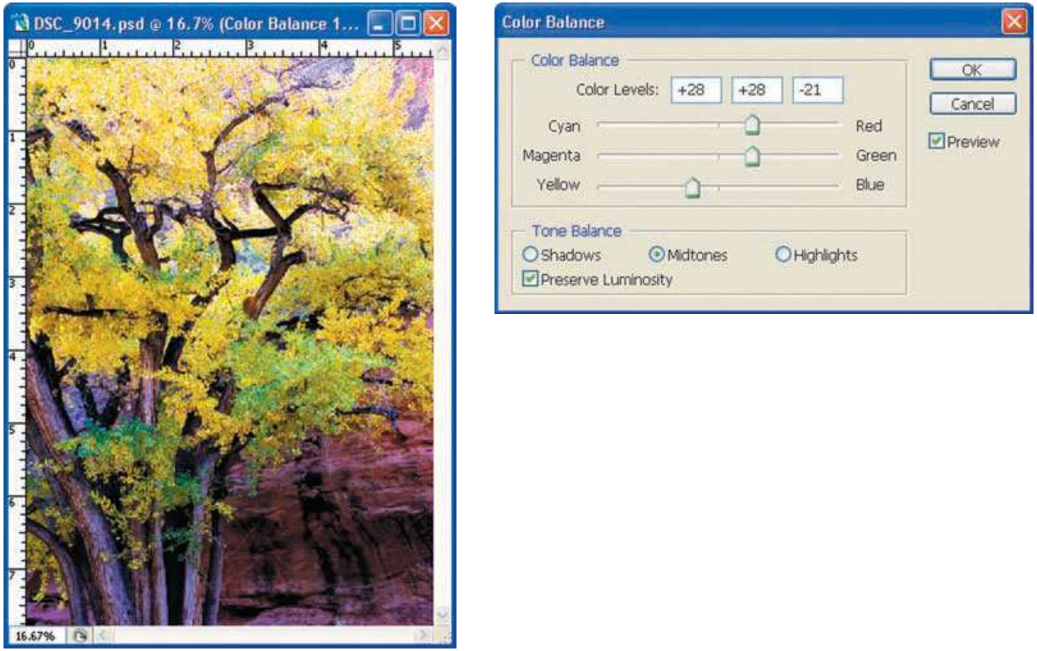


Figure 11.11 Making color changes with the Color Balance adjustment layer

already evaluated the image and found that it has way too much magenta in the background rock area; it should be more "reddish" in color. The tree is also off color, containing blue where it needs more red. The three sliders allow you to readjust color from their opposites (Cyan/Red, Magenta/Green, and Yellow/Blue).

I'll first adjust the Cyan/Red slider by adding red to the image, then I'll add green to the image using the Magenta/Green slider, and then I'll reduce the blue by increasing yellow with the Yellow/Blue slider. The results of making these adjustments put my image in more of a color balance.

3. **Click OK to save changes.**

Finishing the Hue/Saturation Layer

The next steps in the overall-adjustment workflow are to add some visual "pop" to your image, to add color saturation to make final color adjustments, and to increase vibrancy in the image. Hey, I like color! You can also make final corrections to color if your image still contains a slight color hue, like in the example.

With any overall adjustment, sometimes less is more; you might need to make only a slight correction. When adjusting color saturation, for example, sometimes all you have to do is nudge the slider to the right until you see the colors pop a little. "Easy does it" is the rule if you don't want to make your images appear unrealistic. For our test image, I still think there is a little too much blue in the image, especially in the wood part of the tree. Let's fix that and add some pop to the image.

Figure 11.12 Creating the Hue/Saturation layer

To create a Hue/Saturation layer, follow these steps:

1. **Create a Hue/Saturation layer.** Click the Create New Fill or Adjustment Layer button on the Layers palette, and then choose Hue/Saturation, as shown in Figure 11.12. The Hue/Saturation dialog box will appear.
2. **Make sure Preview is selected.** You want to be sure you see these changes before you apply them.
3. **Adjust the hue of the image.** Move the Hue slider to the right to increase the green hue in the image. Move the Hue slider to the left to increase the reds. Figure 11.13 shows the Hue/Saturation window.
4. **Adjust the saturation.** Increase image saturation by moving the Saturation slider slightly to the right. As a rule of thumb, increase the saturation until you see the colors start to pop. Be careful not to add too much color saturation; it can make certain colors in the image *blow out*, or lose detail as they're overpowered by the color. If some areas look blown out, back off your adjustment slightly until you're pleased with the results.

   You can use the Hue/Saturation adjustment layer to adjust individual color hues or saturation amounts. This is an advanced method of color-correcting your images. Just click on the Edit field and choose an individual color to adjust. Experiment with changing the hue and/or saturation of each color to see the results. You might find that adjusting the Master (the default setting) alone can work just fine for your photos.

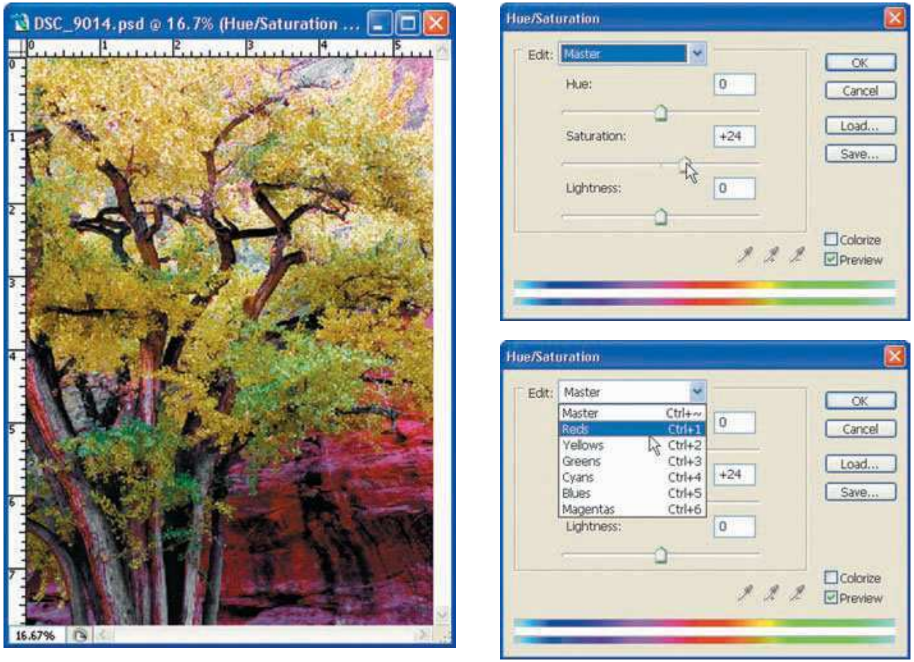
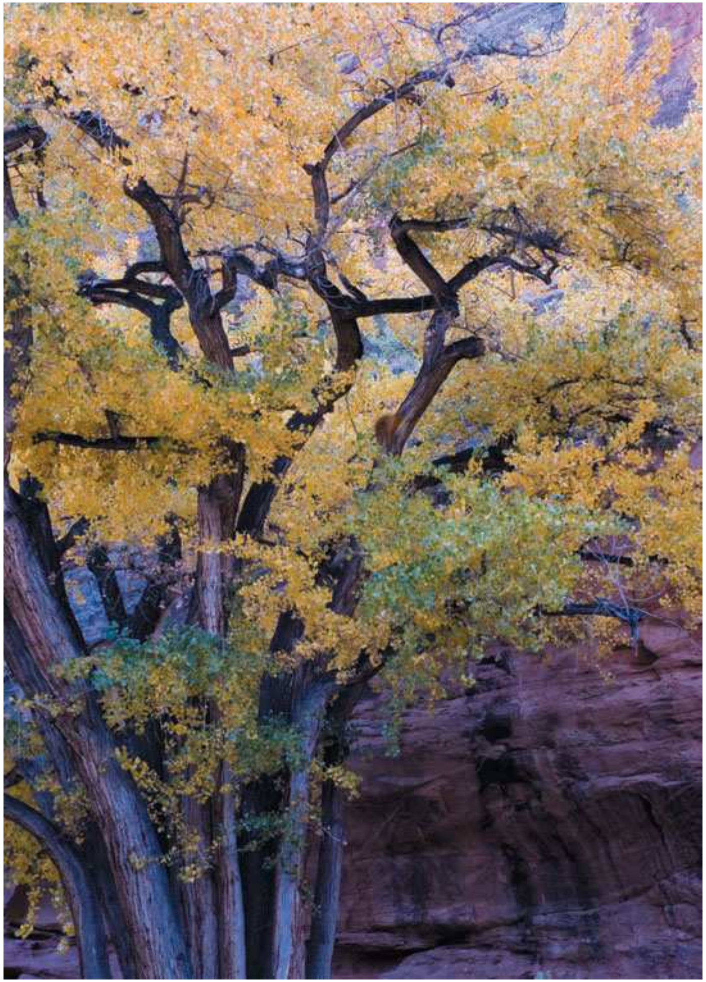


Figure 11.13 Adjusting Hue/Saturation in the image to make final color corrections

For this image, I decreased the saturation in the blue color, increased some saturation in the remaining colors, and darkened the yellow channel a bit.

5. **Check the gamut warning.** Choose View, Gamut Warning. For our test photo of the tree, I actually had to *decrease* some saturation in the red channel to bring the image more within the gamut of my selected output (but then I increased the saturation of some other colors).
6. **Click OK to save your settings.** Figure 11.14 shows the original image compared to the image after I made all the adjustments illustrated in this workflow—Exposure, Shadow/Highlights, Levels, Curves, Color Balance, and finally Hue/Saturation. It's quite a difference! You can see that using a structured color and tonal correction workflow can do wonders for images that are out of whack when it comes to color balance, and you can salvage those off-color images.

Original image



Final adjusted image using the color and tonal correction workflow

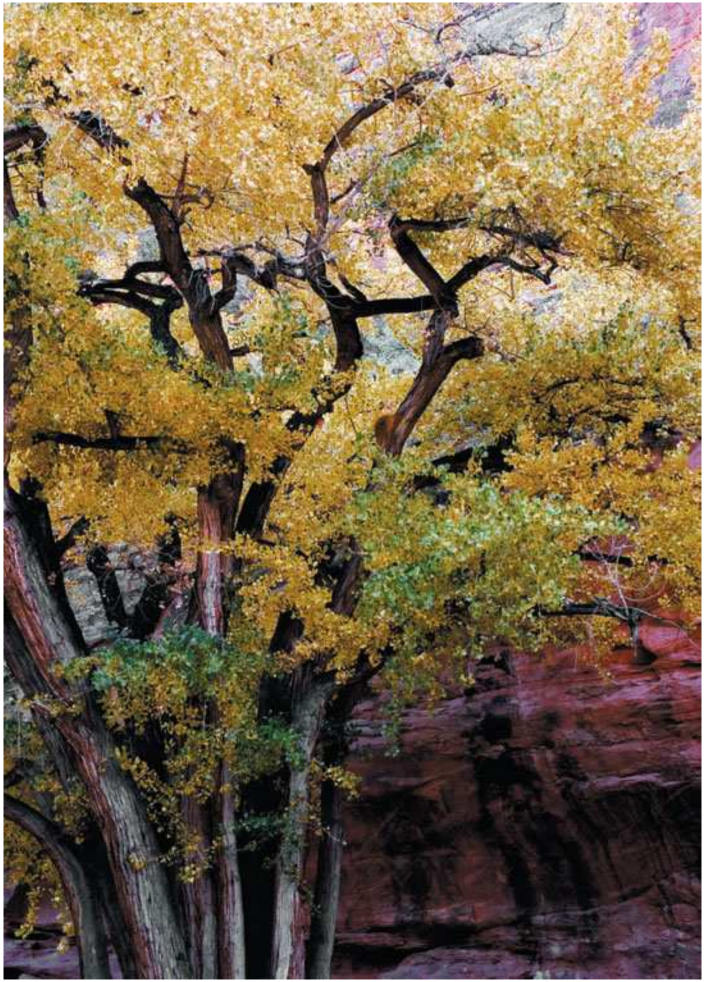


Figure 11.14 The original image and the final image with the Exposure, Shadow/Highlights, Levels, Curves, Color Balance, and Hue/Saturation adjustments applied

Summary

Adjusting color and tonal values of an image is a talent you can only acquire with practice. Using a consistent and rigid workflow, you'll master this most important part of your overall image processing. Following is a quick review of the steps to making color and tonal adjustments to your nature images:

1. Open an image in Photoshop.
2. Save the image as a .PSD file. Make sure you save your image to a Working Images folder.
3. Duplicate the background layer.
4. Evaluate the image and formulate a plan of attack.
5. If needed, correct the exposure and shadows.
6. Create a Levels adjustment layer.
7. Create a Curves adjustment layer.
8. If needed, create a Color Balance adjustment layer.
9. Create a Hue/Saturation adjustment layer.
10. Save your .PSD file to your Working Images folder.

12

Editing Nature Photos

After running your images through overall color and tonal corrections, you'll want to continue finishing off your nature photos by adding edits. I've always recommended that everything you do in Photoshop be part of a workflow, and editing nature photos isn't any different. You still need to stick to a rigid process to help you obtain consistent quality results.

The image-editing workflow is very much like the overall-correction workflow I described earlier. Image edits are made in a step-by-step sequence of best practices. Unlike the procedure for overall color and tonal corrections, however, you do have the freedom to mix up the order of your edits a bit. For the sake of consistency, I recommend you make edits in individual steps.

1. **Plan your edits.** After you complete overall corrections, evaluate your image to determine what type of edits are needed, if any. Common types of edits to plan for include dodging and burning, removing spots with the Spot Healing brush or the Clone Stamp, and retouching using other tools, such as the Paintbrush. I'll review editing tools in this chapter.
2. **Create separate layers for each edit.** After you evaluate an image, and then decide that you need to perform additional editing, as a best practice, you need to create separate layers for each edit. That way you can delete layers in which edits just didn't do the job, without affecting other image-editing layers.

   To create a new layer, press Shift+Ctrl+Alt+E on a PC or Command+Shift+Option+E on a Mac to merge a copy of all visible layers into a new target layer. How 'bout them keystrokes!

   By combining all the previous layers into the new layer, you're essentially merging all the adjustment layers and other edits you've made so far.

   Additionally, you will want to give the layer a proper name. For example, if you're creating a new layer to use the Spot Healing brush to remove spots on your image, give the layer a descriptive name, such as "Reduce Noise." Double-click the layer name in the Layers palette and type in a new name, as in the example shown in Figure 12.1.

Figure 12.1 Name your editing layers with descriptions of what was performed on that layer. It will help give you a reference of what actions you've performed on your images.

> **TIP**
> *After you've created your first editing layer and combined all the visible layers into that layer, you can simply duplicate the new layer for whatever new edit you want to perform next.*

3. **Edit your image.** Now that you have a fresh, newly merged layer to work on, you're ready to use Dodge, Burn, the Spot Healing brush, filters, or any other type of edit you want.

   As a reminder, keep each edit to its own layer. If you start off by dodging and burning, and then you decide you want to apply the Reduce Noise filter as your next step, create a new layer first by choosing Layer, Duplicate Layer.

Common Editing Tools

Most of the tools you'll use for editing will either be provided in the Toolbox or in filters. Filters are effects that you can add to your image, such as a blur, a lens correction, or an artistic change to the image. Either way, edits are not considered corrections; they are additions to (or subtractions from) your images.

When editing nature photos, the most common tools you'll use will be the various selection tools Photoshop offers, the Healing brushes, the Paintbrush, the Dodge and Burn tools, and the Eraser tool. All these tools are easily available in the Toolbox, while filters are located in the Filter menu. (I'll show you how to apply filters in the next chapter.) In the next few sections, you'll take a look at some of the more popular tools used by nature photographers.

Selection Tools

If you're editing photos that look just fine for the most part, often you'll want to make edits (or overall color and tonal adjustments) only to certain parts of them. I'll often make adjustments only to the sky portion of an image during the editing process. Photoshop offers a variety of tools to make selections from defined, editable areas within an image. When you make a selection in Photoshop, you can then edit only that part of the image, without changing the rest. Getting familiar with selections is necessary if you want to edit your individual images with consistent quality.

Selecting only certain parts of your images and editing only those selected parts using the tools covered in this chapter gives you great creative control. You can replace a dull background with a vibrant color, darken a bright sky (see Figure 12.2), brighten a dark sky, and selectively sharpen or blur a part of your image to get the desired effects.

Before selection and adjustment

After selecting the sky only, and then darkening

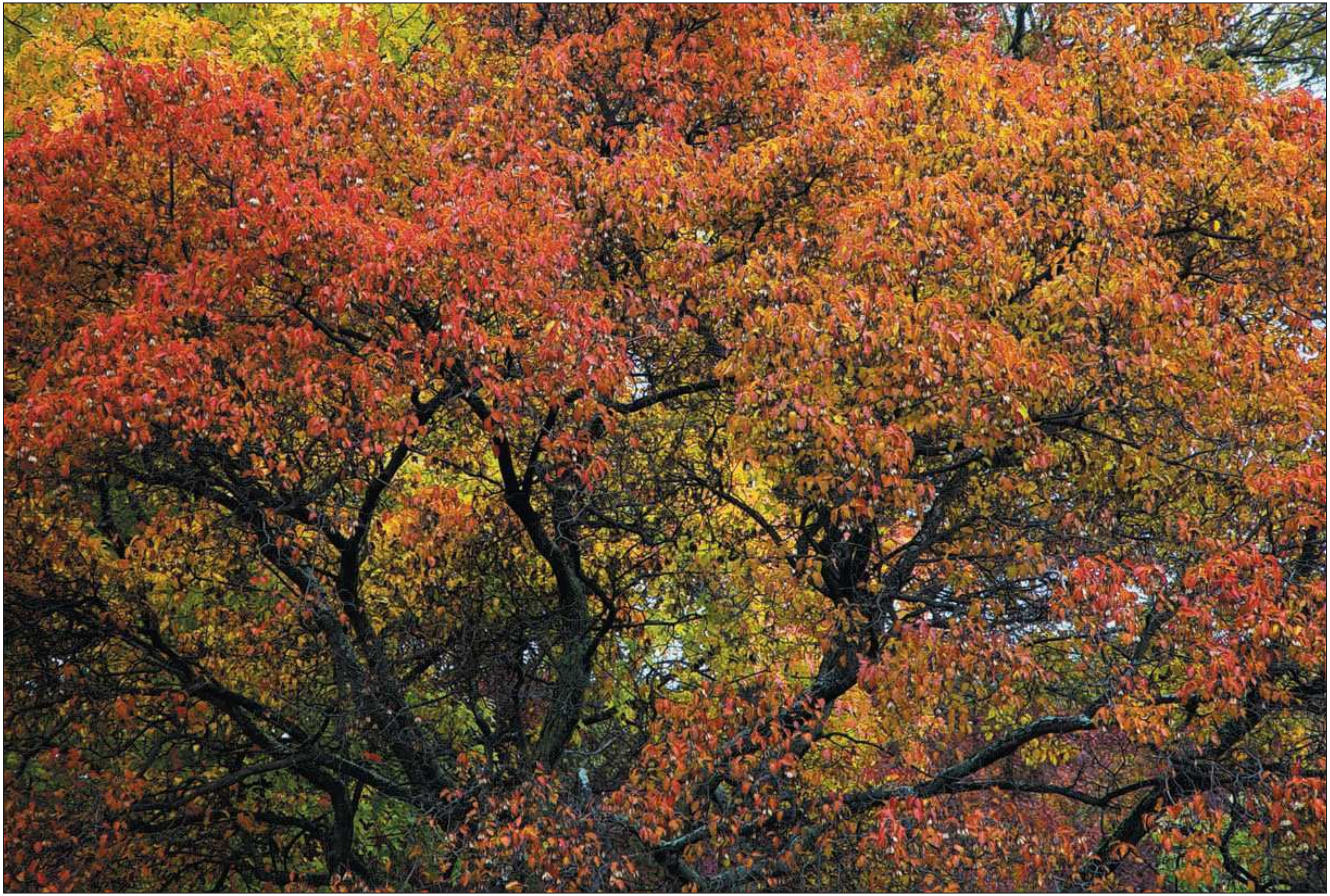
Figure 12.2 By making a selection of only the sky portion of the image, you can make overall adjustments to only that part of the image, without affecting the rest.

The Magic Wand Tool

The Magic Wand tool is probably the most popular selection tool used to make the most common selections in photos. I often use the Magic Wand to select areas of an image that are similar in color if I want to make color or tonal changes to only the selected areas.

The steps to making selections are as follows:

1. **Create a new layer.** You know the drill: Shift+Ctrl+Alt+E on the PC or Shift+Command+Alt+E on the Mac.



2. **Select the part of the image you want to modify using the Magic Wand tool.** As you know by now, I often use the Magic Wand tool to select backgrounds in images that I want to change. I can lighten or darken the background, replace the background with parts from another image, or blur the background. Whichever adjustment I want to use, I have to separate the subject from the background before I make my edits.

   The Magic Wand tool (see Figure 12.3) works best when the area you're selecting is one color (or close to one color) and has distinct boundaries from the remaining areas.

   The Magic Wand tool also works well as a way to select the subject of an image instead of the background. Select the background, and then choose Select, Inverse to swap the selections for the rest of the image.

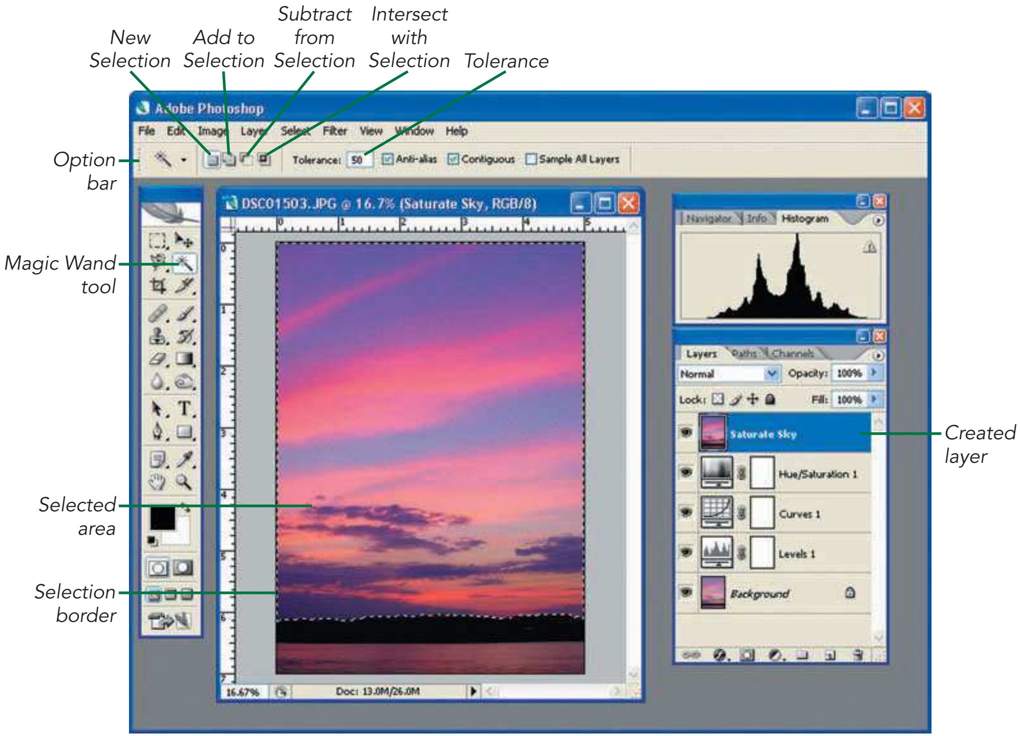


Figure 12.3 The Magic Wand tool and the Photoshop Toolbox

The Feather setting is important when you're making selections. The Feather setting determines how many pixels will be "blended" along the border of the selection you make. The amount of feathering determines how sharp or smooth the edges of the selection are. For the image in Figure 12.3, I applied a Feather radius of two pixels by choosing Select, Feather (Ctrl+Alt+D on the PC or Command+Option+D on the Mac), and then typing 2 in the Feather Radius field in the Feather Selection window.

3. **Apply corrections to the image.** For the sunrise photo, I adjusted the tone and contrast of the sky without adjusting color and tone for the rest of the image. For the lake, I simply chose Select, Inverse, and then chose Image, Adjustments. Figure 12.4 shows the results.

Figure 12.4 Making changes to the selected part of the image only

The Lasso and Magnetic Lasso Tools

I use the Magic Wand tool for many of the selections I make in images in Photoshop, but there are more cool selection tools to choose from. The three lasso tools (see the Toolbox in Figure 12.5) are used to create finer selections in your image. Each has its own characteristics and function. The three lasso tools include:

- **Lasso tool.** This tool is used for freeform drawing of selections. You can use this tool to edit distinct areas in the image, which you draw around using the Lasso tool.
- **Magnetic Lasso tool.** This tool is used to trace more complex shapes. The selection marquee (the dotted line surrounding your selection, also called the "marching ants") snaps to the selection like metal to a magnet.
- **Polygonal Lasso tool.** This tool is used for drawing straight edges of a selection. The Polygonal Lasso tool is great for making selections when the areas to select are shapes that have straight lines (such as boxes, rectangles, and triangles).

Figure 12.5 The lasso tools

TIP
You can always remove a selection if you want to start over by choosing Select, Deselect or by clicking Ctrl+D on the PC or Command+D on the Mac. Additionally, ending one selection and starting another automatically will deselect the first selection. To add to a selection, hold down the Shift key and continue in a different location in the image. You can even change tools while you're at it! To remove a portion of your selection, press the Alt key (Option on a Mac) and use any of the selection tools to outline areas you don't want selected.

Selection Options

When you make selections with any tools, options are available to make your selections more precise. Figure 12.6 shows the Select menu, which provides functionality to help you work with selections.

Figure 12.6 The Select menu

The most commonly used options in the Select menu include:

- **All.** When you select All, you select the *entire* layer that's active. You can also press Ctrl+A on the PC or Command+A on the Mac to select the entire image.
- **Deselect.** Choose Deselect to remove the selection outline you have made. When making selections, you often have to deselect to start over when your selections don't come out right—hey, it happens! You can also press Ctrl+D on the PC or Command+D on the Mac to deselect a selection outline.
- **Inverse.** Sometimes you will want to select an area that's just tough to select. If you're lucky, the rest of the image might be easier to select. In that case, select the easier area, and then choose Select, Inverse or press Ctrl+Shift+I on the PC or Command+Shift+I on the Mac. The Inverse command reverses your selection, selecting the previously unselected portion of your image.
- **Feather.** As I've mentioned previously, a feather of two or three pixels provides a smooth, realistic edge for your selections in many photos. Experiment with setting the feature to different numbers of pixels until you find the right setting for your photo. To feather a selection, choose Select, Feather or press Ctrl+Alt+D on the PC or Command+Option+D on the Mac.
- **Grow.** The Grow command increases the contiguous areas of your selection to include areas that are similar in color. To grow a selection, choose Select, Grow.
- **Similar.** The Similar command increases your selection to include all like colors of the current selection, regardless of their place in the image. To expand a noncontiguous selection with similar colors, choose Select, Similar.

TIP

If you've used the Magic Wand to create your selection, you can change the Tolerance level after you've made the selection, and it will affect the number of pixels that Grow and Similar will add to the selection. In other words, if you had a tolerance of 16 when you made the original selection and then you clicked Grow, you'd get a tolerance of 16 added to the selection. Changing the number to 64 will select a larger spectrum when Grow is used. With that, you can go back and forth (using the Undo command), modifying the tolerance level until you get exactly the pixels you want.

Before you can use the Select commands, you must have actual selections made in your image. Selections can be cumbersome, but with practice you can become more proficient. I suggest you practice using the three lasso tools, and especially the Magic Wand tool, and then experiment using the Feather, Grow, and Similar commands to fine-tune your selections. Selections are one of the most challenging tasks to master in Photoshop, and the best way to get proficient with selections is to become comfortable with each type of selection and the commands to customize those selections.

Dodging and Burning

When I start to put the final touches on my images, some of the first edits I perform are dodging and burning. This is an old technique that dates back to the old film and darkroom days of photography. Dodging and burning allowed me to darken or lighten certain areas of a print to my liking by either reducing or increasing exposure to certain parts of the print. You can do the same thing in Photoshop using the Dodge and Burn tools, shown in Figure 12.7.

Dodging is a technique you use when you want to lighten a certain area of an image; burning is a technique you use when you want to darken a certain area of an image. Whether you're working on landscapes or still lifes, evaluate your images to see whether areas need to be dodged or burned. Figure 12.8 shows an image with a lot of contrast and colors that are a little too bright. Shooting fall colors in ideal conditions (on an overcast day, after a rainstorm) can bring out the colors, but it can also produce oversaturated colors, especially reds and magentas. After my evaluation, I decided to lighten up some of the dark areas in the background, and to tone down some of the oversaturated red and magenta areas of the image.

Figure 12.7 The Dodge, Burn, and Sponge tools

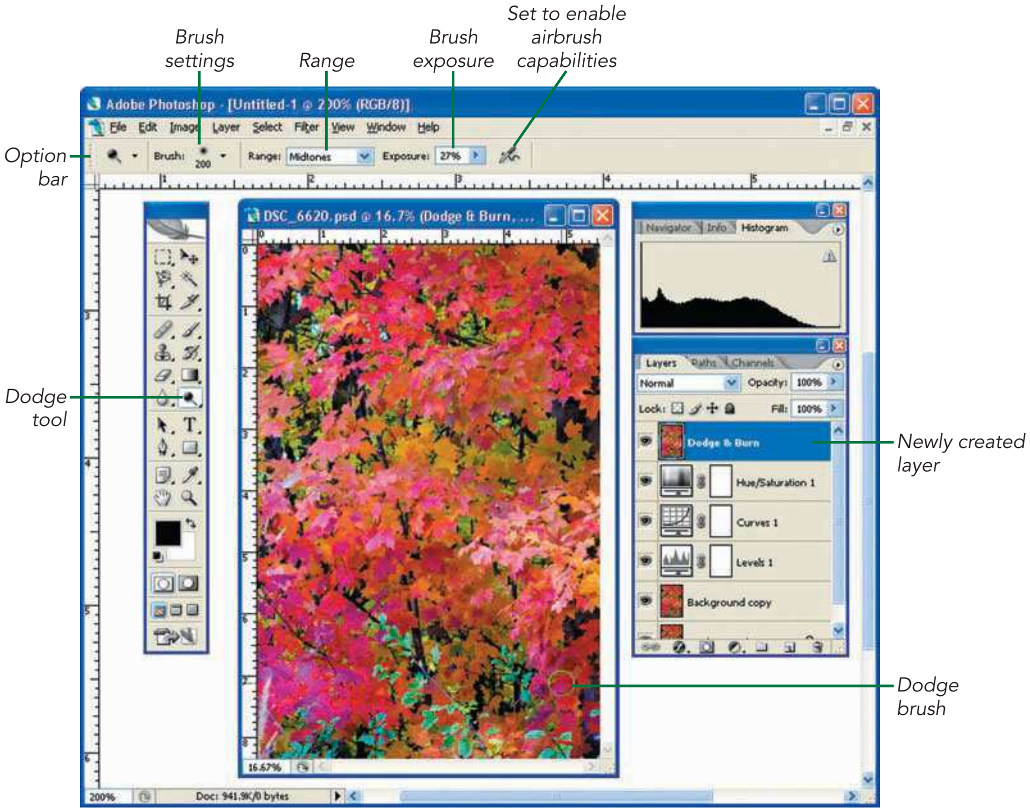


Figure 12.8 You can use the Dodge tool for an image in which the colors are too bright

The Sponge tool is useful when you want to make slight color-saturation adjustments to an area. For example, you can decrease the color saturation of a certain area in which the red might be too bright or "blown out," giving an unnatural look to the photo. The Sponge tool can also come in handy to help bring out-of-gamut areas of your image back into a color range that your printer can handle.

I often use the Dodge and Burn tools to fine-tune my images when there's a little too much contrast between the light and dark areas. Figure 12.9 shows the image before my edits, and then after I applied some dodging and burning.

Before dodging and burning *After dodging and burning*

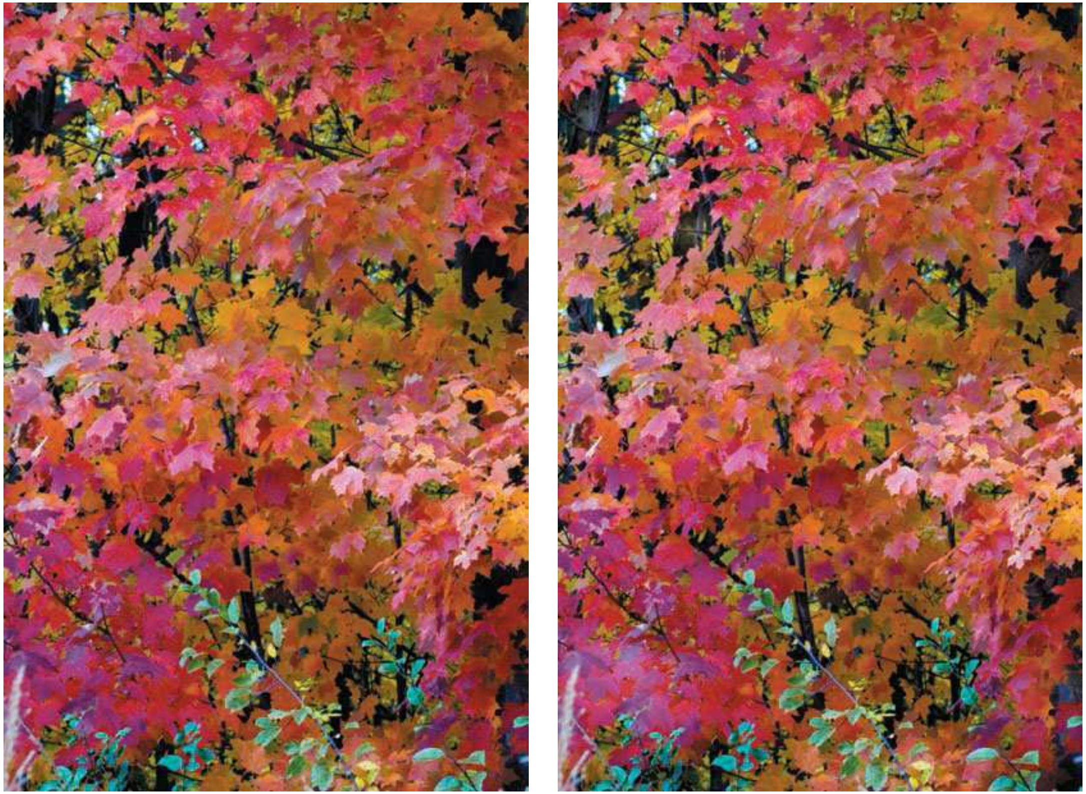


Figure 12.9 Using the Dodge tool

Using the Paintbrush

The Paintbrush tool will be one of your most-used tools in the Toolbox. The Paintbrush is as simple as its name; it's a paintbrush! Not only can you specify colors and the opacity (how much of the edit is visible, based on a scale of one to 100 percent) of those colors, but you can also use it to "paint" in other effects you add to your image when you use it with layer masks. (I'll provide more information on layer masks later in this chapter, in the "Layer Masks to Selectively Correct Images" section.) In addition to the Paintbrush tool, the Pencil and the Color Replacement tools are also commonly used to "paint" in changes to your photos. Figure 12.10 shows the Paintbrush tool and its flyout menu.

Numerous Paintbrush sizes, tips, and modes are available on the Option bar, as well as in the Brushes palette (choose Window, Brushes or simply press the F5 key), as shown in Figure 12.11. They're useful with many Photoshop image-editing techniques, allowing you to customize your brush types and various settings.

Figure 12.10 The Paintbrush tool and flyout menu

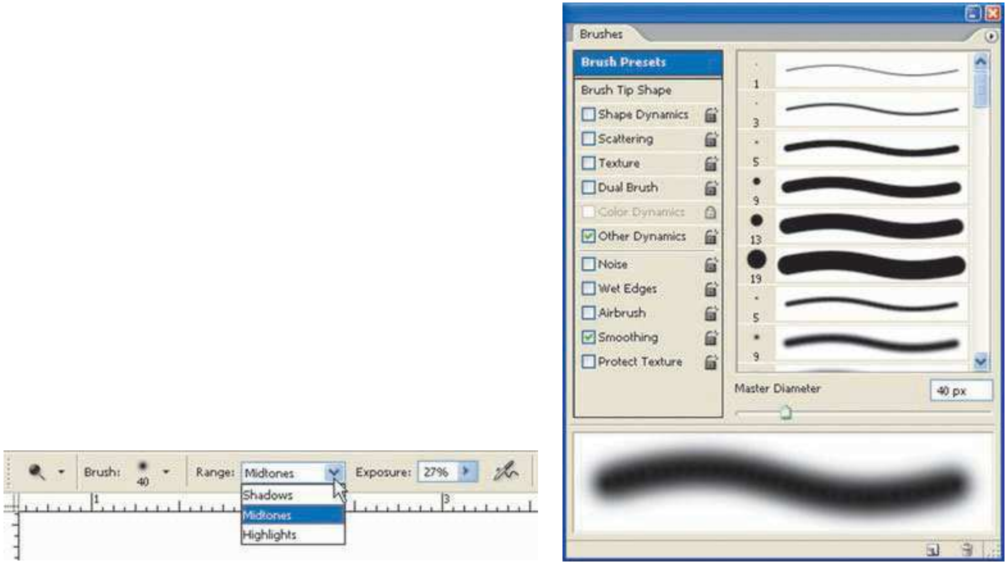


Figure 12.11 The Brushes palette and the Option bar with the Paintbrush tool options

Using the Healing Brushes

One of the downfalls (the only one I can think of) to using a digital SLR is the possibility of dust getting onto your image sensor. It has happened to me on a few occasions, usually when I'm changing lenses. For users of compact digital cameras, dust spots aren't really possible because the lens is built into the camera. Another source of dust or scratches on images is related to scanned negatives or transparencies. Many of us have huge photo libraries from years of shooting the old "analog" way. Those shots are still as valuable today as yesterday, but when you're scanning, it's always possible to scan some specks of dust too. That's where the Healing brushes come in to help.

Some of the neatest editing tools that Photoshop offers are the Healing brush tools. The flyout menu shown in Figure 12.12 includes four Healing brush tools that enable you to correct minor details. Use the Healing brush tool to sample a selection of pixels, and then paint those selected pixels to other areas. It's a great way to retouch areas of your images! The Spot Healing brush, new in CS2, is even easier to use. Simply select the Spot Healing brush and start painting areas to retouch; the brush samples surrounding pixels itself, without you having to make a selection. The Patch tool works like the Healing brush, except you're actually making a selection of an area (just Alt+click on the PC or Option+click on the Mac) to use for painting in the selected pixels.

Figure 12.12 The Healing brush and flyout menu

When using the Healing Brushes, there are three options: Source, Destination, and Transparent. If Source is selected, the selected shape can be moved around the image, and the area beneath the selection (the source area) will fill the area that was selected (the destination area). Choose the Destination option, and it's more like a copy and paste function, because the selection area becomes the source area and its contents are moved to the new spot in your document—the destination area. When the Transparent option is selected, it works in conjunction with the other two options, and the result is a transparent overlay of the selected area of the image. You cannot control the amount of transparency, but you can continually add to the selection to create some interesting effects.

The Clone Stamp Tool

The Clone Stamp tool is the equivalent of a rubber stamp, like the kind they use at the tax office. It allows you to sample part of an image (that you want to clone) and apply that sample elsewhere in the image by painting it with the Clone Stamp brush. All Paintbrush tips work with the Clone Stamp tool, so it's a great retouching alternative. One of its special versions, the Pattern Stamp tool, recreates patterns from the cloned selection and applies them to other parts of your images. Figure 12.13 shows the Clone Stamp tool flyout menu.

The Eraser Tool

The Eraser tool is the digital equivalent of those little pink erasers at the ends of pencils. Remember using those? You can erase pixels as you move the Eraser brush over them, changing the behavior of the brush specified by using the choices on the Option bar.

Use the Background Eraser tool to remove the effects of overall image adjustments made to only certain areas or layers of the image. To erase all similar pixels within a layer, use the Magic Eraser tool. Among the tools shown in Figure 12.14 (in the flyout menu) are the Background Eraser and the Magic Eraser.

Figure 12.13 The Clone Stamp tool and flyout menu

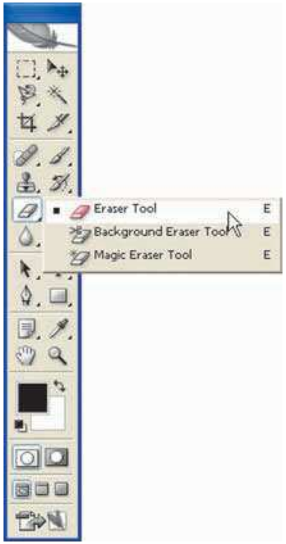
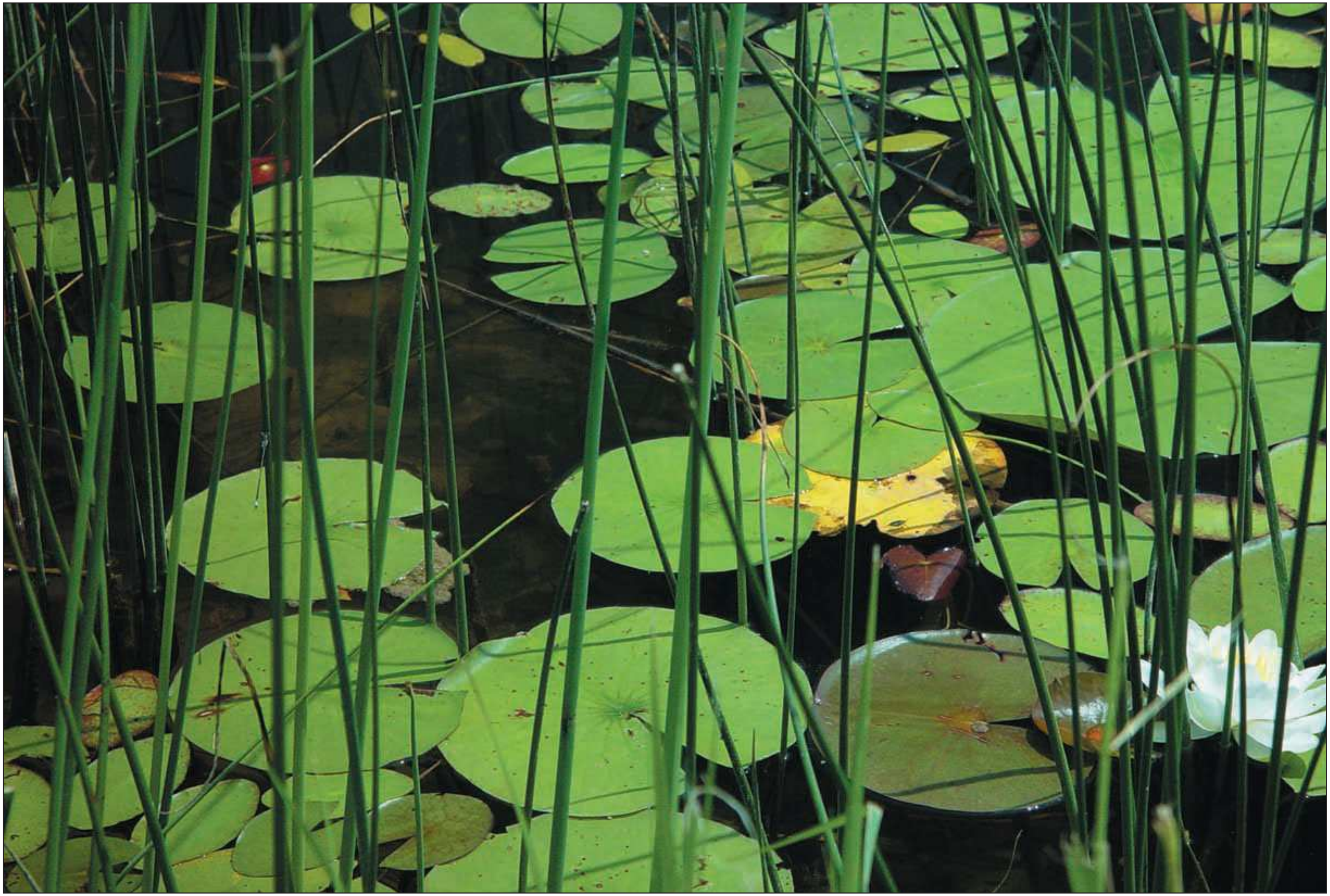


Figure 12.14 The Eraser tools

> **TIP**
> *If you use Adobe Photoshop Elements instead of Photoshop, the Eraser tool is a great way to selectively remove effects or filters you might add to an image without the aid of layer masks. (More on those later.) Elements does not offer layer masks, which are an advanced editing technique, but if you add effects to an image and you only want a part of the image to have those effects, you can use the Eraser tool to erase whatever parts of the effect you don't want.*



Layer Masks to Selectively Correct Images

One of the more advanced features of Photoshop that separates it from any other image editor on the market is layer masks. These specialized layers let you hide or expose specific parts of a layer by painting the portions you want to hide, emphasize, or expose using the Paintbrush tool. I often use layer masks in my editing to selectively apply blurs, sharpening, or color and tonal corrections to an image. For instance, I might have a landscape photo in which I want to darken the sky and add contrast using Curves, but I don't want to add those changes to the foreground of the image. In that case, I go ahead and make the adjustments to the image, but then create a layer mask that hides the changes. I then use the Paintbrush to paint in the changes only to the sky portion of the image.

You can use layer masks for:

- **Selective blurs.** You can create a layer in a landscape to blur or soften part of the subject. (This is a portrait-editing technique.) You might not want the entire image blurred, but by using a layer mask, you can paint in the blur effect to only the areas you want.
- **Selective overall (color or tonal) adjustments.** You can create a layer mask to selectively paint in the effects of an overall adjustment. This is a great trick to use for retouching nature photographs selectively.
- **Selectively darkening a background.** You can darken the entire image using the Hue/Saturation Lightness slider to the level at which the background is darkened to your liking. Create a layer mask, and then paint back in the areas that you don't want darkened!

The following steps give you a detailed example of using layer masks in nature images, showing you how to use one to hide the sharp portions of a blurred image, and then selectively paint back in the parts of the image you want to remain sharp. You can apply many such effects and filters, and then use layer masks to selectively paint in the effects.

To apply a selective effect (in this case, a blur) to an image using a layer mask, follow these steps:

1. **Create a layer to apply the effect to.** Don't forget to give descriptive names to your layers when you create them. You can change the layer name by clicking the name in the Layers palette and typing in the new text.

2. **Blur the image by choosing Filters, Blur, Gaussian Blur.** I want to add a lot of blur to this image, so I am using a setting over 38, as shown in Figure 12.15.

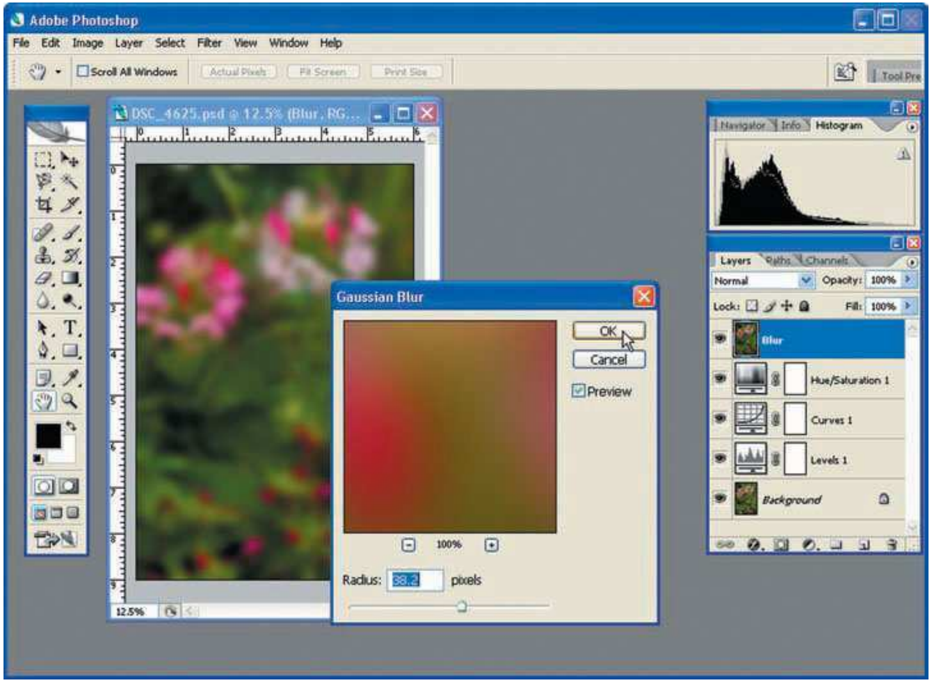


Figure 12.15 Adding a Gaussian blur to the entire image

3. **Create a layer mask.** Choose Layer, Layer Mask. Choose the Reveal All option in the flyout menu to fill the layer with white, allowing the effects of the layer adjustment to show through. Choosing the Hide All option in the flyout menu paints the layer with black to hide the effects of the Gaussian blur layer adjustment. For this example, I've chosen Reveal All.

   As a friendly warning, I suggest that you do *not* use the Add Layer Mask button in the Layers palette; you can't choose the Reveal or Hide options that way.

The Reveal All option lets the effects of the Gaussian Blur continue to show in the image, as shown in Figure 12.16. Choose this option to paint the areas to hide the Gaussian Blur effect. Choosing the Hide All option hides the Gaussian Blur effect, allowing you to use a Paintbrush tool to paint in the areas of the image where you want the Gaussian Blur effect.

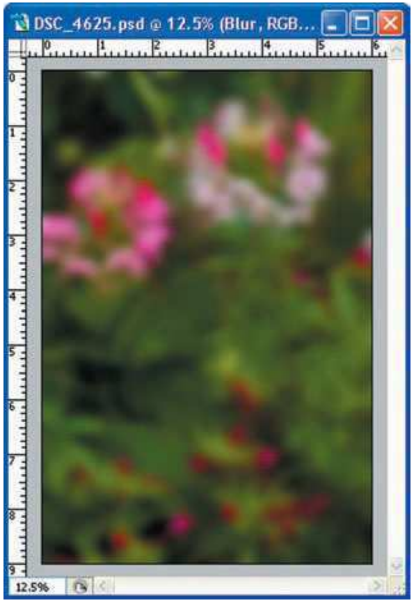


Figure 12.16 The image with the Blur filter (a lot of it!) applied

4. **Click the Paintbrush tool in the Photoshop Toolbox.** Press D to set the foreground color to white and the background color to black. The D key always changes these back to the Photoshop default colors (hence the D): white for foreground and black for background. Press X to reverse these colors.

   Using black as the foreground color in the Reveal All mode paints away the layer mask; using white as the foreground color paints the layer mask back in. You can also paint with shades of gray to get toned-down effects.

5. **Lower the opacity.** Lower the opacity to around 20 percent in the Opacity field on the Option bar. Lowering the opacity reduces the "strength" of your painting, resulting in a more realistic transition between the masked and the painted areas of the layer. You can increase the painting effect every time you click and hold the mouse, and then paint more.
6. **Paint in the portion of the image you want to remain in focus.** Painting areas of the image hides the Gaussian blur and reveals the sharper image behind the Gaussian blur mask, leaving the unpainted areas still blurred. Painting reveals the sharper details of the chosen parts of the flower, but leaves (no pun intended!) a softened look for the rest of the foliage, as shown in Figure 12.17.

Figure 12.17 Painting in the sharp portions of the image to retain

To selectively sharpen an image, use the same approach you used to blur the image: Create a layer and merge the previous layers. Sharpen the entire image and create a layer mask to hide the sharpening. Paint the areas you want to sharpen, and that's it! Don't forget, using layer masks works great when you're adding Artistic filters to your images, such as the Graphic Pen or the Charcoal filter. I'll cover more on filters in the next chapter.

Summary

Applying edits to your nature images is one of the last steps you take before getting your image ready for output. The most important thing to remember when making edits to your images is to continue on with a workflow where you left off making color and tonal adjustments. Just remember to create a separate layer for each type of edit (such as dodging and burning, blurring, or retouching using the Paintbrush tool), and name that layer for future reference.

There are other types of edits you can make to your nature images, such as converting an image from color to black and white, adding an Artistic filter, or stitching multiple images together in a panorama, which I'll cover in the next chapter. There's more editing fun to come!

13

Manipulating Nature and Landscapes in Photoshop

For years, I was what you might consider a *traditional* photographer. Shoot an image, and then process that image to the exact vision of the scene as I saw it. No manipulation, just straight processing and printing. For the past few years, I've been leaning more and more toward pushing the edge of my creativity using my digital cameras, Photoshop, and third-party filter products. I've grown fond of taking images that I would never use normally, and then turning those images into works of art using various Photoshop techniques, with or without the use of filters. The results even astound me, and they have opened up creative possibilities that I normally wouldn't think of.

Whether our peers in the art community like to hear it or not, nature photographers are artists, not photojournalists—there's a big difference. Photojournalists record an event, publish a photo, and that's about it. Nature photographers do extensive research to find locations to photograph, scout the area, and determine the time of day to capture the desired lighting, and then we spend enormous amounts of time and energy taking photos of nature. Once the photo is taken in the field, we're still only halfway there. We often spend more time processing and fine-tuning images in the digital darkroom before we're satisfied with the final result, the final print. If that's not fine art, I don't know what is.

In this chapter, I'm going to cover techniques that you can use to enhance your nature photos—and yes, that means *manipulating* them as well. You might have heard the arguments, especially in the early days of digital, that manipulating photos is wrong and that it detracts from the true art of photography. I'm not going to take sides on that, and I don't suggest that you do either. There are valid points on both sides of the subject, but I think that pertains to other forms of photography, such as photojournalism. I think fine art photography is a totally different ballgame without any rules, unless you decide to self-impose them.

When you're creating digital nature images for your personal or professional enjoyment, who is to say you can't tweak the images to your heart's content? Did Picasso or Salvador Dali reproduce direct representations of the subjects they were painting? No! They produced their artwork to where they had envisioned, which, incidentally, was *way* out there. I think that nature photographers fall into the same category. Create your images the way you envision them, and don't limit yourself to whatever someone else says is a photograph.

In short, do whatever blows your hair back.

Photoshop Filters

The more I mess around with creating effects for my nature and landscape photos, the more fun I have. It reminds me why I got into photography in the first place—to have fun creating images. Yes, most of my photos you've seen displayed throughout the book were created without the use of any manipulation effects, but that

doesn't mean I can't go back and mess around with some of those images. Sometimes you can dig into your image library, pick a few favorites, and have some fun with them by adding Photoshop artistic filters, oversaturating images for some different color effects, converting color images to appear as if they were captured in infrared, or just converting your color images to black and white. Let your creative conscience be your guide, and you'll be surprised at how you can change the entire appearance of an image.

Photoshop filters are editing functions that are used mainly for transforming images. There are even a few in there that are used to correct a camera lens' shortcomings. You'll also find the filters to sharpen your images—Smart Sharpen, Sharpen, and Unsharp Mask. For the most part, most of the filters provided add artistic effects to your images.

Applying a filter to an image is one of the last steps you want to perform in your editing workflow. You want to make sure that your image is adjusted for color, tone, and any other editing techniques before applying filters. Treat applying filters as part of your image-editing workflow and use separate layers for each filter addition.

Before you dive into applying all these cool effects to your images, I have a few interesting points for you to consider.

- **Filters are located in the Filter menu.** To access filters, just click on the Filter menu, shown in Figure 13.1. As you'll see, many of the artistic filter choices include submenus that include even more filters.
- **Only some filters will work in 16-bit mode.** Many filters won't work in 16-bit mode. If you're working on an image in 16-bit mode and you access the Filter menu, you'll notice some of the choices are grayed out, which means that those particular filters will only work in 8-bit mode. To convert your image to 8-bit mode, choose Image, Mode, 8 Bits/Channel.
- **Create a new layer to apply filters.** Press Shift+Ctrl+Alt+E (Shift+Command+Option+E on a Mac). The best effects can be obtained by applying filters to a duplicate layer, and then adjusting the opacity or fill in the Layers palette. Duplicating the background layer retains the original image and allows you to go back and delete the duplicate if you don't like the effect you're applying.

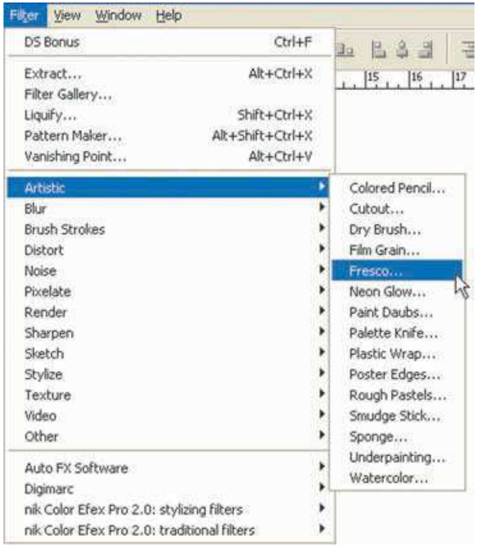


Figure 13.1 The Filter menu

- **Combine multiple filters for multiple effects.** There are no rules when it comes to using filters, and of the more than 70 artistic filters available in Photoshop, the possibilities for using any of these filters in conjunction with others are limitless.
- **Additional filters are available from other software manufacturers.** Yes, there are legions of geeks out there creating new filters to apply special effects to your images as we speak! The two leading filter packages out there are nik Color Efex Pro (http://www.nikmultimedia.com) and Auto FX (http://www.autofx.com). Both nik and Auto FX provide packages with many artistic filters, as well as enhanced correction filters. You can download demo versions of their Photoshop filters from their Web sites.
- **Most filters can be accessed through the Photoshop Filter Gallery.** One sweet little custom interface Photoshop supplies is the Filter Gallery. You can access all of the artistic filters Photoshop provides in one easy-to-use interface, shown in Figure 13.2. To access the Filter Gallery, choose Filter, Filter Gallery.
- **Most filters include a unique set of controls.** You'll discover that filters include controls (see Figure 13.3) that, when changed using sliders, change the effects of the particular filter.

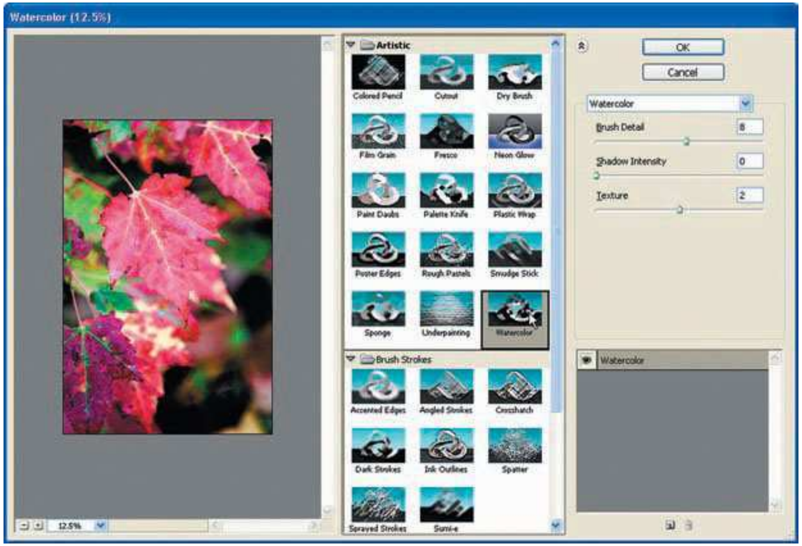
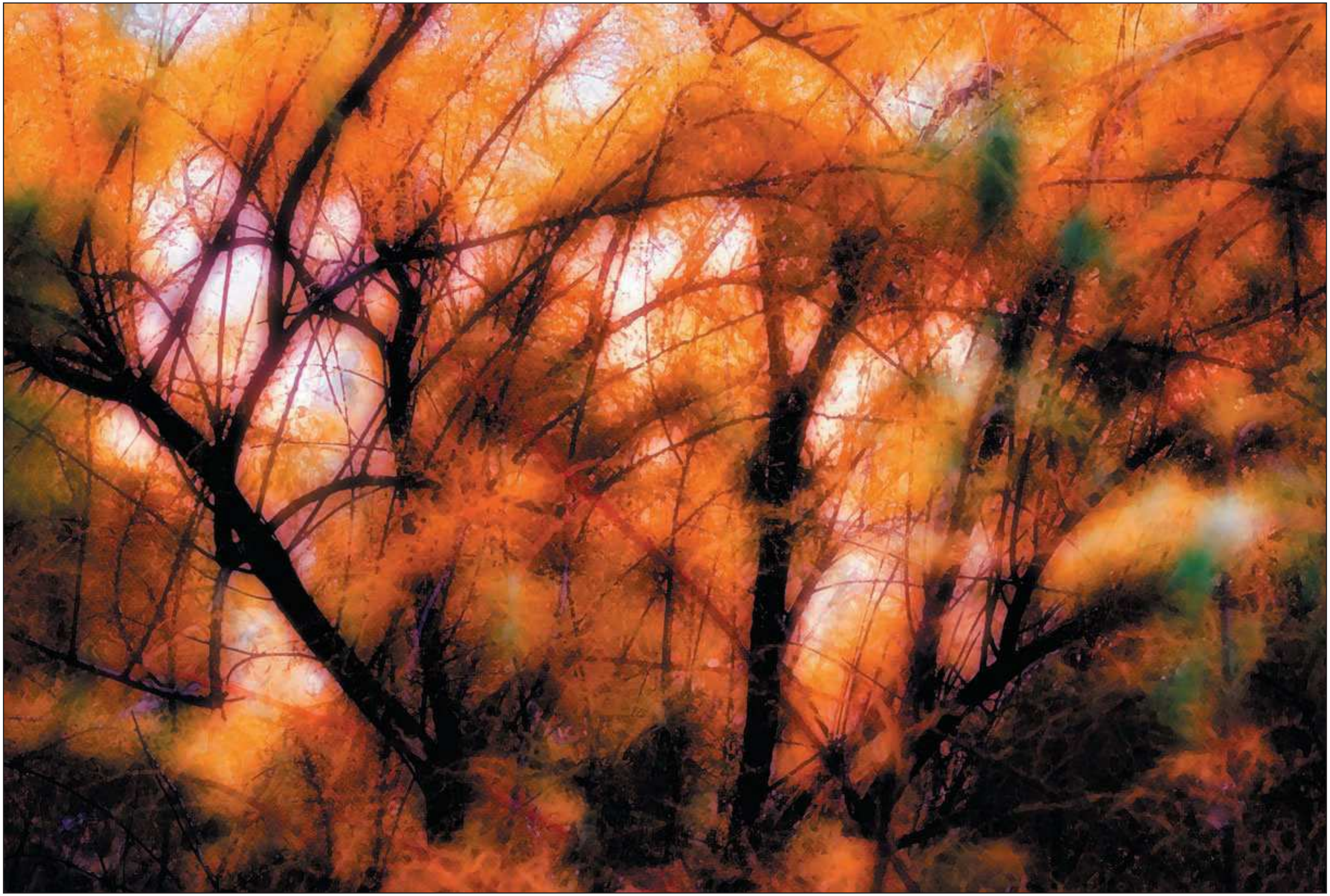


Figure 13.2 The Filter Gallery suffices as a one-stop-shop graphical interface to more than 45 artistic Photoshop filters.

Figure 13.3 Each filter will have its own set of controls. Use the sliders to change the effect of the filter.



Artistic Filters

As you've seen, you can easily access Artistic filters using the Filter Gallery or by choosing Filter, Artistic. This is the area where you can really let your artistic inhibitions go out the window, enjoy an evening with a cup of tea and a bright computer display, and go wild on some of your images. Figure 13.4 shows the Artistic filter choices offered in the Filter Gallery.

Figure 13.5 shows a simple autumn color subject from my portfolio, one that normally I might have not bothered processing, printing, framing, and mounting. This is an example of an image to which you can try applying Artistic effects. Take some time to find lost treasures in your image library, making an ordinary image into something you originally didn't envision.

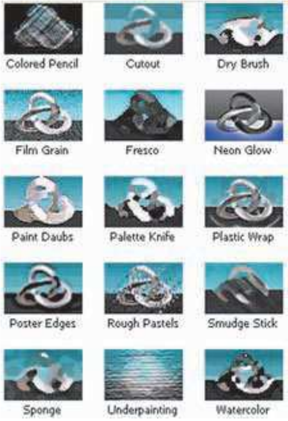


Figure 13.4 The Artistic filters are where you can really enhance your images with special effects.

Figure 13.5 The original image before applying Artistic effects

Descriptions and examples of the Artistic filters and their uses include:

- **Colored Pencil.** This filter provides the effect of an image drawn using colored pencils.
- **Cutout.** This filter allows you to create an image that looks as if it was made of cut-up pieces of colored paper.
- **Dry Brush.** This filter simulates a bristle brush that has had paint applied and mostly wiped off, becoming "dry." It creates a wispy or stippled effect.
- **Film Grain.** For some photographers, film grain is something to avoid; for others it adds an artistic touch. The Film Grain filter applies an even grain-like pattern to shadows and midtones.
- **Fresco.** This filter creates a coarse, daub-like pattern, similar to a fresco painting.
- **Neon Glow.** This filter adds glows to an image in a softening manner. Using different brushes achieves various effects.
- **Paint Daubs**. This filter applies a number of different painting effects, using 50 different brush sizes and a number of brush types.
- **Palette Knife.** This filter transforms the image into a thinly painted scene with texture underneath.
- **Plastic Wrap.** This one is really out there. The Plastic Wrap filter creates a plastic wrap–like texture over the entire image. It's great for creating abstracts.

  Our technical editor on this book, Ron Rockwell, likes this filter too. Just for fun, he suggests creating blue as a foreground color and red as the background color. Run Filter, Render, Clouds, and then Filter, Render, Difference Clouds. Then run the Plastic Wrap filter. It looks like a bowl of blackberry jam! It totally destroys any image you had, but it's neat.
- **Poster Edges.** This filter reduces the number of colors in an image (called *posterizing*) while drawing black lines around edges.
- **Rough Pastels.** This filter applies chalk strokes to the image and creates a textured background. The good thing about this one is that you don't get any chalk on your fingers or your mouse!
- **Smudge Stick.** Like the name implies, the Smudge Stick *shmushes* (another one of my technical terms) backgrounds, while highlights become brighter with less detail.
- **Sponge.** Whhhooooo… lives in a pineapple under the sea…. The Sponge simulates the sponge-painting technique used by artists.
- **Underpainting.** I bet this is a word you don't see in any dictionary. The Underpainting filter simply applies the image to a textured background.
- **Watercolor.** This filter is for those like me, who couldn't create a painting even with a paint-by-numbers set. The Watercolor filter creates a watercolor painting by reducing detail while watering down the highlights.

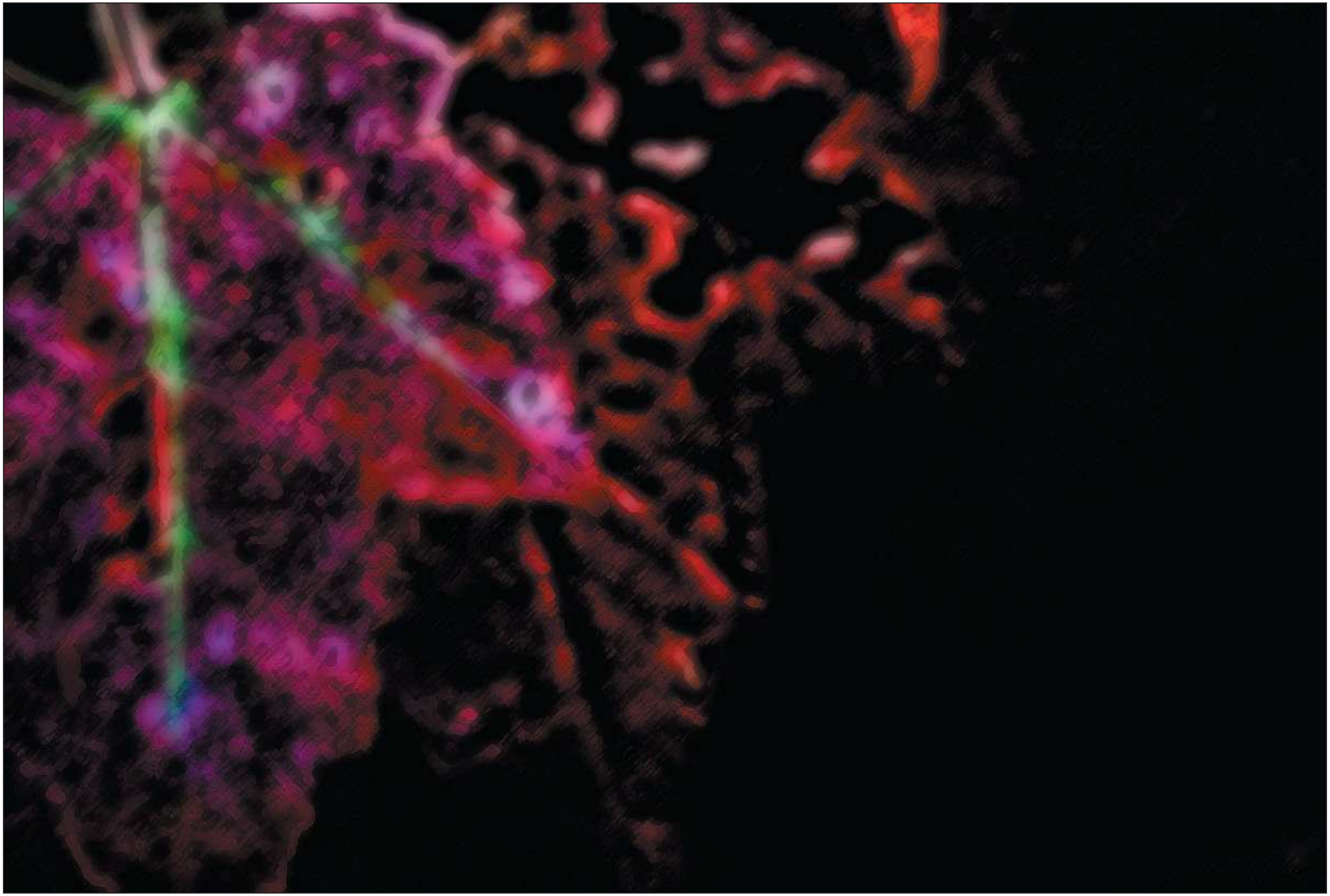


Figure 13.6 shows examples of some of the artistic effects you can add to an ordinary image to transform it into a more artistic presentation. Remember, you can combine filters; just create new layers for each one and combine the effects at your own will!

Colored Pencil filter

Dry Brush filter

Figure 13.6 Applying Artistic filters to an ordinary image can transform it into a totally new artistic presentation. You can adjust the opacity of layers containing filter effects, letting the original image show through and giving you some very nice results.

Rough Pastels filter

Underpainting filter

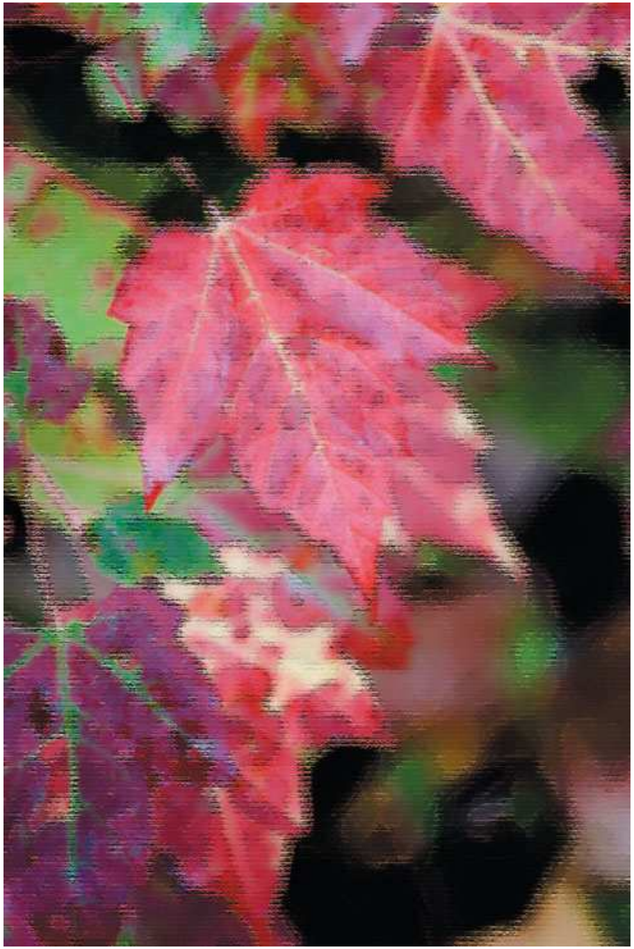


Figure 13.6 Continued.

Sponge filter

Watercolor filter

Figure 13.6 Continued.

The Brush Strokes, Distort, and Sketch Filters

Image-altering effects don't stop with the Artistic filters. Next on the long list of Photoshop filters are the Sketch and Brush Strokes filters. These filters transform images to emulations of an artist's hand using pencils, brushes, and pens on art paper. Figure 13.7 shows the Sketch, Distort, and Brush Strokes filters in the Filter Gallery.

The Brush Strokes, Distort, and Sketch filters included in the Filters Gallery include the following:

Figure 13.7 Brush Strokes, Distort, and Sketch filters in the Filter Gallery

Brush Strokes Filters

- **Accented Edges.** Accented Edges changes the edges of the image, simulating either dark or light edges. The filter gives the photo a soft, painted look.
- **Angled Strokes.** This filter paints the image using angled strokes, like an eccentric painter might.
- **Crosshatch.** This filter transforms the image as if it were painted with a crosshatch pattern.
- **Dark Strokes.** Similar to the Water Paper Sketch filter, the Dark Strokes filter can provide a fine-art look to portraits.
- **Ink Outlines.** Remember Salvador Dali? The Ink Outlines filter simulates a pen-and-ink drawing effect on the image to create a surrealistic look.
- **Spatter.** This filter gives your image the appearance that ink was shot through a small nozzle, like those tattooed guys (you know, the ones wearing leather vests and no shirts so they can show off their own artwork) do back at the tattoo studio.
- **Sprayed Strokes.** The Sprayed Strokes filter is similar to the Spatter filter except that you can change the direction in which the strokes are made. I don't think they can do those when doing tattoos (at least not without some pain).
- **Sumi-e.** That's what I say when I say something maybe I shouldn't have: "Go ahead and sue me!" Anyway, this filter gives an eerie feeling to the image, kind of like lawyers do to the rest of us.

Distort Filters

- **Diffuse Glow.** This Distort filter adds a ghostly effect to an image. You might have seen some photos used in fashion magazines—you know, the ones of starving girls with an eerie glow to them? I bet the photographer used the Diffuse Glow filter on those. For nature photos, this can be a fun one to play around with.
- **Glass.** This is one of my absolute favorite filters. I like taking my fall-color images and applying this filter to make it appear as though you're looking through glass blocks or frosted glass (like a shower door) at an image. See my example in Figure 13.8.
- **Ocean Ripple.** The Ocean Ripple filter is really another extension of the Glass filter. It gives your image another distorted glass effect.

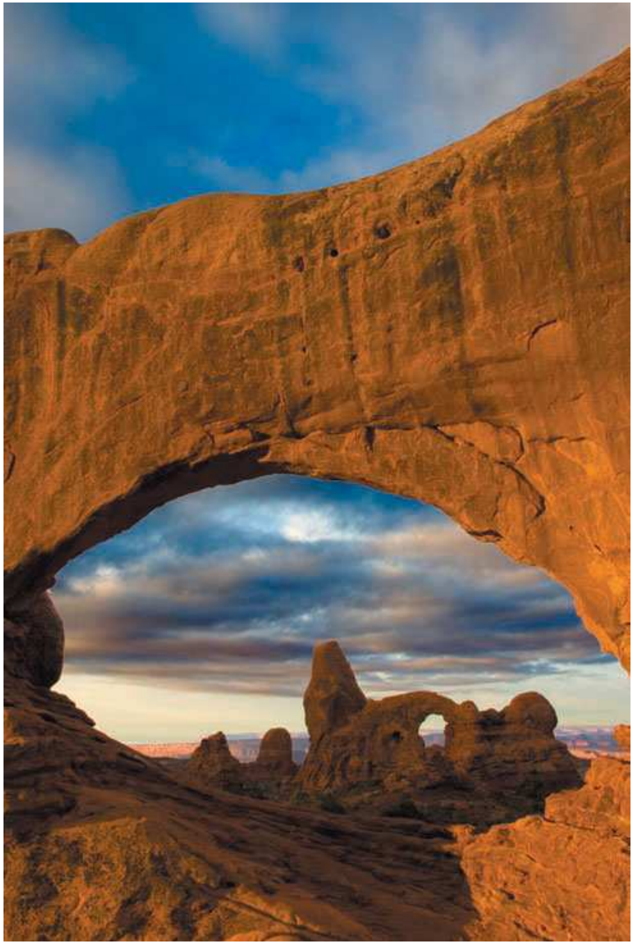
Figure 13.8 The Glass filter, part of the Distort family of filters, really gives you a different way to distort an image for some great effects.

Sketch Filters

- **Bas Relief.** I like to fish, especially for bass. It's a great stress reliever. This filter changes dark and light areas, swapping color while the image is transformed into a carved-looking plate.
- **Chalk and Charcoal.** This filter transforms your image into a monochrome chalk or charcoal drawing, just like when we did those drawings in art class.
- **Charcoal.** Like the name implies, this filter creates a charcoal drawing with drawn highlights.
- **Chrome.** The auto industry stopped using chrome years ago; plastic is cheaper! This filter brings the chrome look back, transforming the image as if it were molded in shiny chrome. You'll get better mileage out of this one if you're into that sort of thing.
- **Conté Crayon.** A Conté crayon is usually sepia/red or black in color and is a really common drawing tool in art classes. It starts out as a quarter-inch square stick about three inches long, and you can either draw with the blunt end of it or use the side for a wide swath of tone/color. Usually you draw on newsprint for really quick (30-second) figure studies. In the Photoshop Filter Gallery, though, the Conté crayon creates the effect of a monochromatic drawing with a textured background, such as canvas, sandstone, or brick.
- **Graphic Pen.** This filter swaps foreground and background colors while creating a grainy black-and-white image.
- **Halftone Pattern.** The Halftone Pattern filter creates a halftone version of the image while adding a dotted, circular, or horizontal pattern. Your resulting image will be reduced in color, with a pattern.
- **Note Paper.** This filter produces a toneless grayscale and embossed version of the image.
- **Photocopy.** Like the name says, the results of this filter look like you made a photocopy of your photo.
- **Plaster.** Looks like they left the "ed" off the end of the word. Similar to the Note Paper filter, this filter creates a grayish embossed version of the image.
- **Reticulation.** I got caught reticulating many times. Back in the days of the chemical darkroom, we would purposely develop film in ice-cold temperatures, thus creating a cracked pattern on the film emulsion. The Reticulation filter simulates the same thing, applying a textured look to a monochromatic version of the image.
- **Stamp.** Like the name says, this filter makes your image look as if it were printed using a rubber stamp. Black and white are the only two colors.
- **Torn Edges.** This one is similar to the Stamp filter effect, but with smoother edges.
- **Water Paper.** Ah yes, the fine art photographer, using the Water Paper filter to apply paint colors that look like they were poured on and merged.

Figure 13.9 shows examples of how a regular photo can be modified using the Brush Strokes, Distort, and Sketch filters. Remember, you can combine filters on the same image; just follow the best practice of using separate layers for each filter effect. With the use of the Opacity adjustment in the Layers palette, these filters work well as a semi-transparent effect to the “real” or filtered image.

Original image



Sprayed Strokes filter

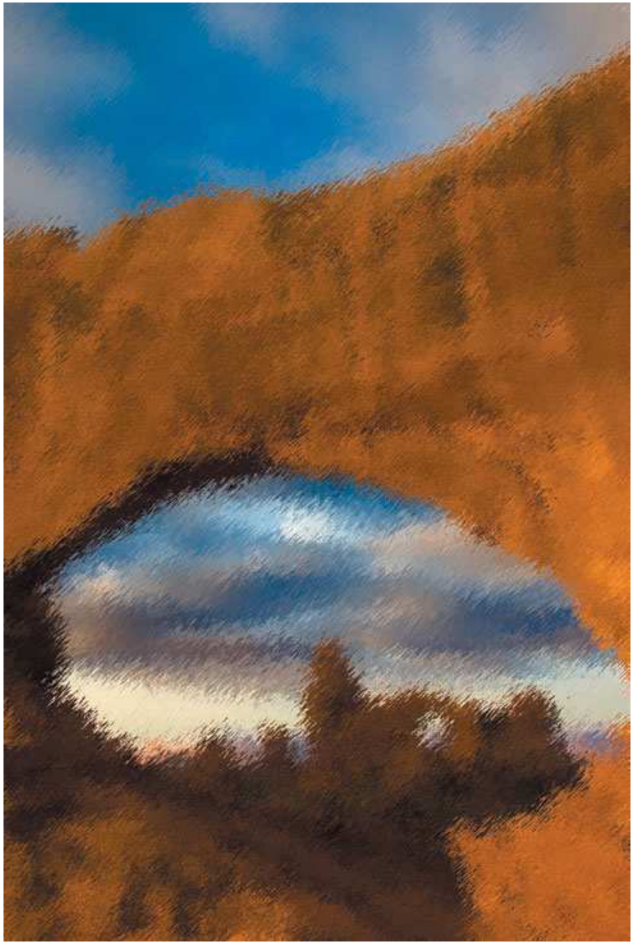
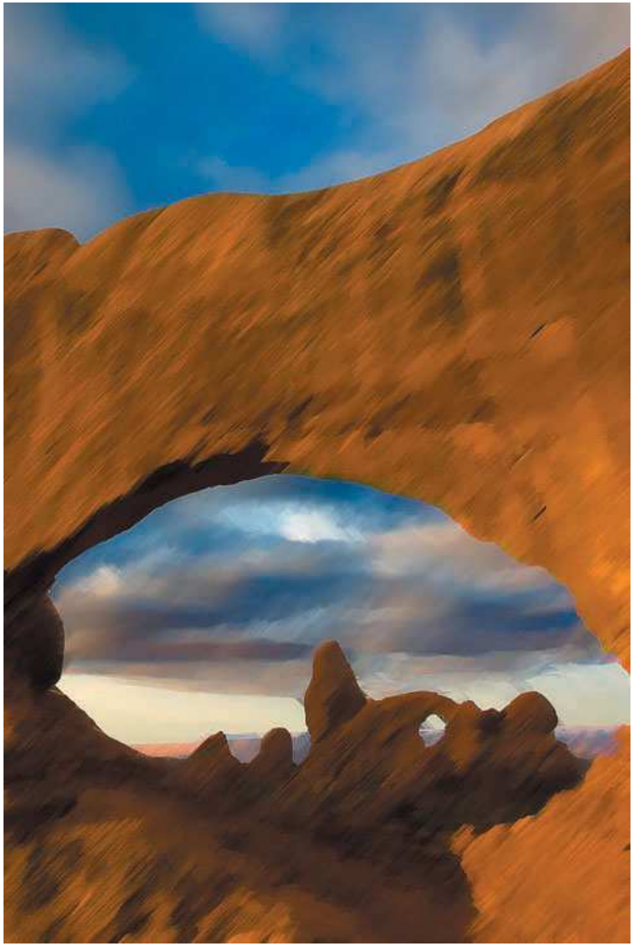


Figure 13.9 Using the Brush Strokes, Distort, or Sketch filters (or a combination thereof) to produce other versions of an image

Angled Strokes filter



Spatter filter

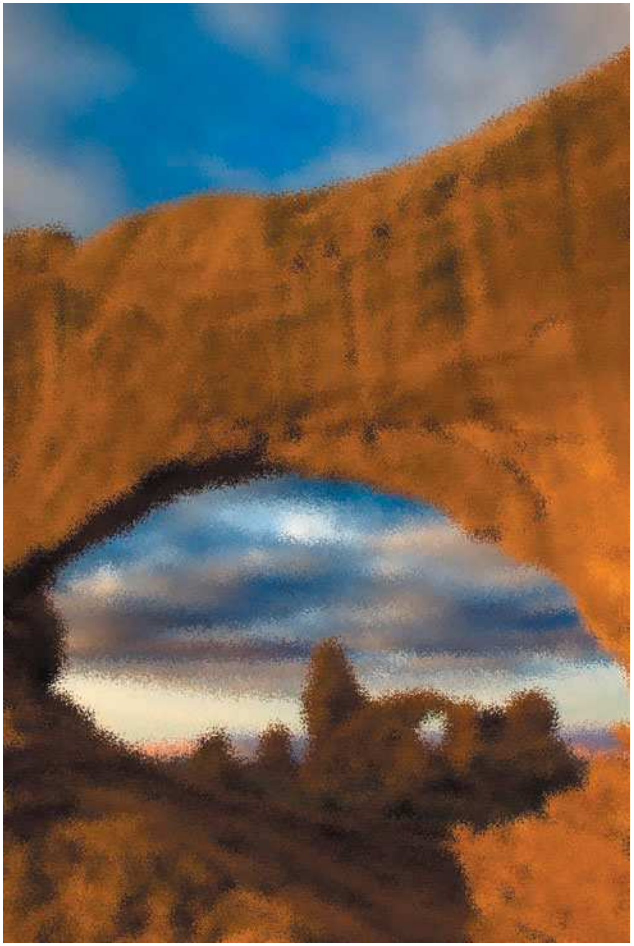
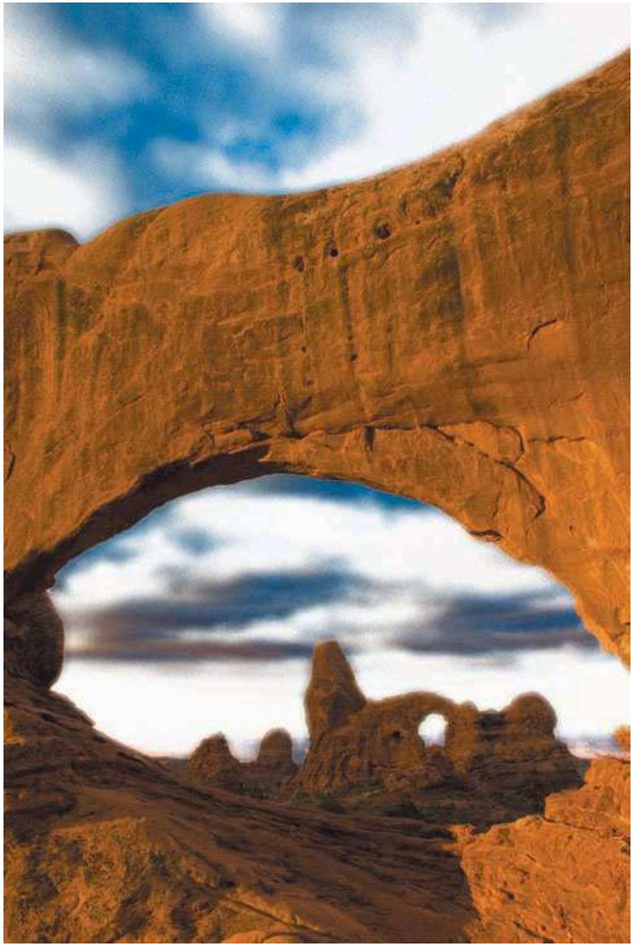


Figure 13.9 Continued.

Diffused Glow filter



Glass Blocks filter

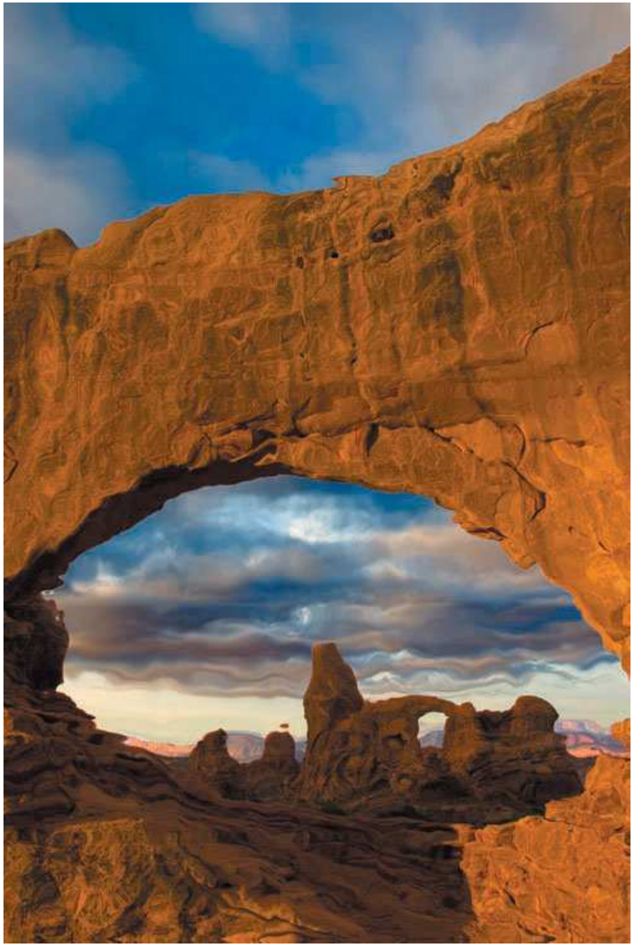
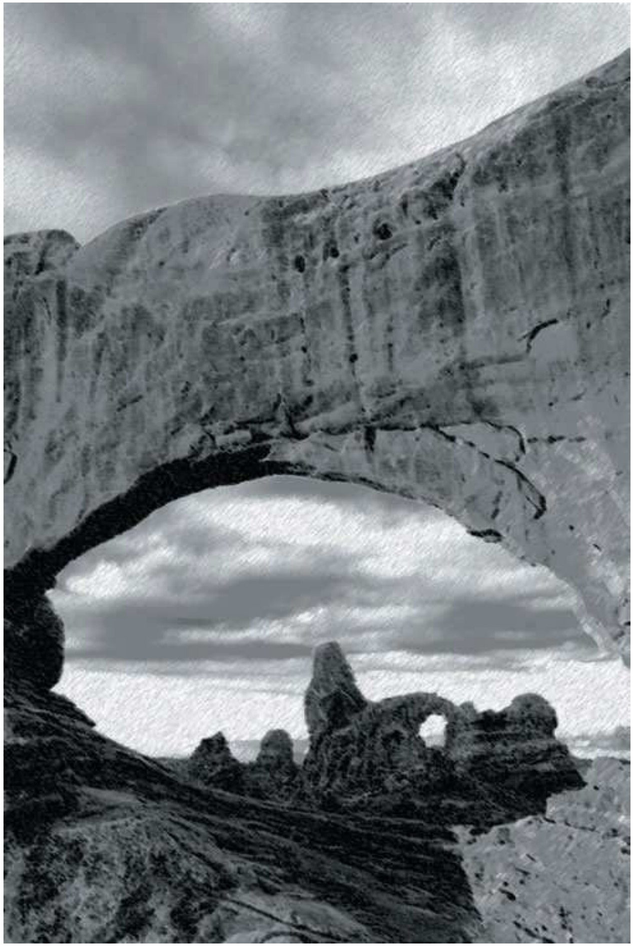


Figure 13.9 Continued.

Chalk and Charcoal filter



Water Paper filter

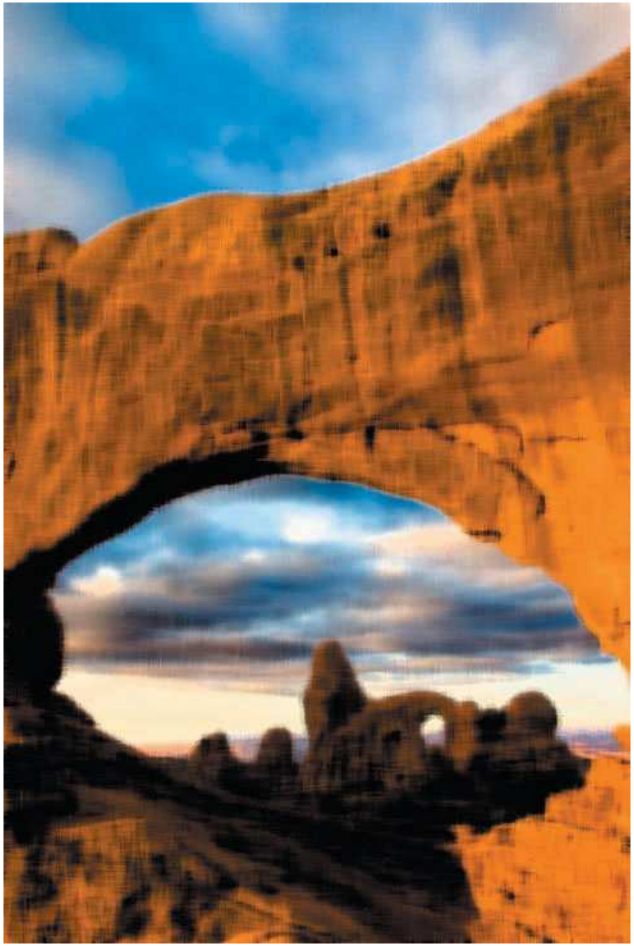


Figure 13.9 Continued.

Photoshop Black-and-White Landscape Techniques

Black-and-white photographs have always been considered the "fine art" of photography. There are some collectors and purists who, for reasons that aren't completely understood, think traditional black and white is the only true art form for photography. Personally, I've never believed that for a second. Besides, I personally like color, and I'm of the opinion that art is what you make of it. The most important question to ask yourself as a nature photographer is, why should I limit myself to either black and white or color? Do both!

As with a lot of the cool things you can do in Photoshop, converting a color digital image to a B&W image can be accomplished in a number of ways. I'm going to show you a few that I use. The first is a quickie method, using the Desaturate command. A second technique uses the Channel Mixer. A third method uses the Hue/Saturation adjustment layer to convert color photos to black and white. Each method has its own merits and its own uses.

> **TIP**
> *Many digital cameras provide you with the ability to capture images in black-and-white mode. One of the advantages of shooting images with digital cameras and using Photoshop to process the images is the fact that you can have the best of both worlds—color and black and white. I suggest always shooting your images in color mode; you always have the option to convert any image to black and white later, when you're processing the image in Photoshop.*

Using the Desaturate Command to Convert to Black and White

Sometimes it's best to take the path of least resistance. There are many ways to convert color images to black and white, and there's one little command that will allow you to do that quickly—the Desaturate command. Here are the steps to that quick conversion:

1. **Open a photo in Photoshop that you want to convert to black and white.** Converting to black and white is a step that should be taken after all of your color, tonal, and image edits are made. Converting an image to black and white should be the next step in your workflow.
2. **Create a new layer to use when you make your B&W conversion.** Create a new layer by pressing Shift+Ctrl+Alt+E (Shift+Command+Option+E on a Mac). Name this new layer Desaturate.
3. **Desaturate the image.** Choose Image, Adjustments, Desaturate or press Shift+Ctrl+U (Shift+Command+U on a Mac).

You'll find that using this procedure to convert your image to B&W is about as easy as it comes. The Desaturate command simply converts the entire image to black and white, shown in the example in Figure 13.10.

TIP

When converting color images to black and white, an important factor to consider is that you still have an RGB or CMYK image, not grayscale. Therefore, your printer will be using the whole spectrum of ink at its command to print gray. One printer might produce a pink-tinted print, and the next might produce a cool blue. By changing the image at some point to grayscale, you're at least using only black (and gray, in some printers) ink.

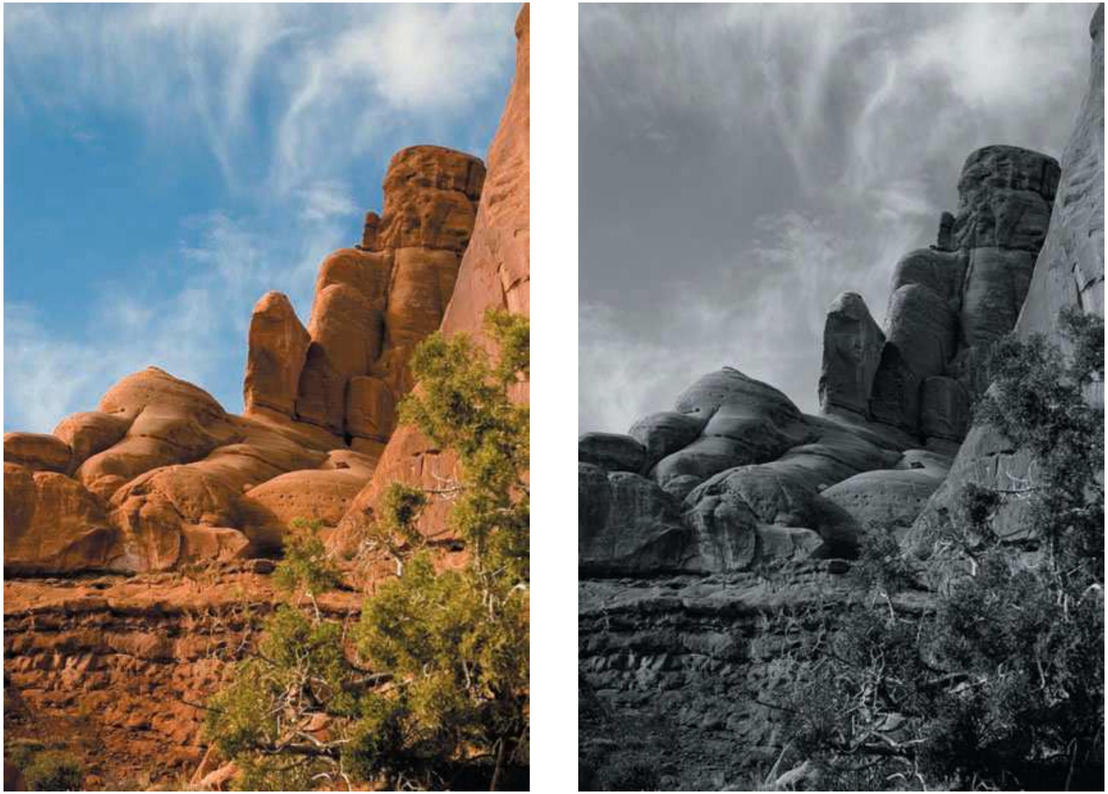


Figure 13.10 The Desaturate command is the quickest way to convert color images to black and white.

TIP

When converting color images to black and white using the Desaturate command or the other methods described in this chapter, you might have to make some additional overall corrections to finish your image. I often add contrast and possibly some burning and dodging to an image after I've converted it to black and white. Because the overall appearance of the image is going to change, you'll need to make some further adjustments to your liking. Remember to create a new layer for each correction.

Using the Hue/Saturation Adjustment to Convert to Black and White

The second method to convert color images to B&W involves the Hue/Saturation adjustment. I like to use this method to desaturate yellows, greens, blues, cyans, and magentas in a color image. I then use the Red Saturation control to add a little tone back into the image. By adding a little red back into the image, you get that "selenium-toned" look (black-and-white photos with a brownish tone to them) to your converted B&W photos. Here's how to use this method:

1. **Open a photo you want to convert to B&W.** As in the Desaturate method, make sure you've made your tonal and color corrections before proceeding. (I covered those corrections in Chapter 11.)
2. **Create a new layer to use for the Hue/Saturation adjustment.** Create a new layer by pressing Shift+Ctrl+Alt+E (Shift+Command+Option+E on a Mac). Name this new layer Hue-Saturation.
3. **Desaturate colors.** Click the Edit menu and select Yellows (Ctrl+2 on a PC and Command+2 on a Mac). In the Saturation control, move the Saturation slider all the way to a setting of 100 to remove the yellow color. Repeat this step for each of the other colors: greens, cyans, blues, and magentas. (You adjust the reds in the next step.)
4. **Desaturate the Red channel.** Move the slider all the way to a setting of 100. Move the slider to the left slightly, until you obtain a toned effect. A setting of 70 to 40 usually gives me the toned effect I like in some of my B&W conversions. The photo, when converted to B&W as shown in Figure 13.11, is slightly toned with a Red-channel Saturation setting of 40.

Figure 13.11 Creating a B&W image with a selenium-toned appearance using the Hue/Saturation adjustment

Using the Channel Mixer to Convert to Black and White

The Channel Mixer is another method for converting color images into black and white. Use the Channel Mixer, remove color from your entire image, and then fine-tune the Red, Green, and Blue channels to obtain more control over the tones of the image you are converting. As a reminder, Photoshop always gives you many ways to obtain similar results, and using the Channel Mixer is another way to convert color images to B&W. To use the Channel Mixer to make your conversion, follow these steps:

1. **Open a photo in Photoshop that you want to convert to B&W.** Process the photo as you would any other, making the color and tonal adjustments, and then the edits.
2. **Create a new layer to use for the Channel Mixer.** Create a new layer by pressing Shift+Ctrl+Alt+E (Shift+Command+Option+E on a Mac). Name this new layer Channel Mixer.
3. **Start the Channel Mixer.** Choose Image, Adjustments, Channel Mixer.
4. **Click the Monochrome check box.** Clicking the Monochrome check box immediately converts your image to black and white. Figure 13.12 shows the Monochrome check box and the Channel Mixer window.

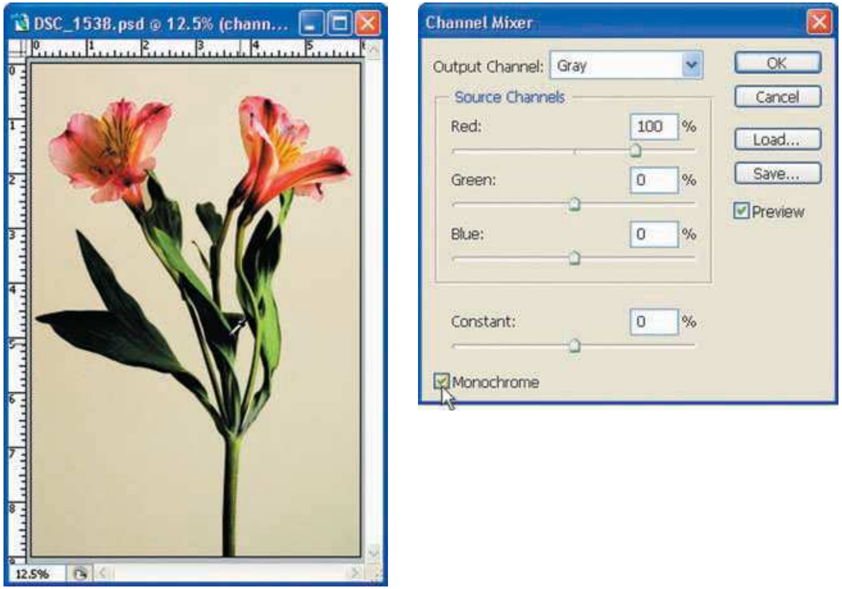


Figure 13.12 Using the Channel Mixer to convert color images to black and white with finer tuning of color channels

5. **Make adjustments to fine-tune the color channels.** Make moderate adjustments to the Red, Green, and Blue channels in the Channel Mixer dialog box. You don't need to move the Red, Green, or Blue sliders much. Most of the time, you'll want to adjust the Red channel slightly to get the B&W effect you want.

   Experiment by moving each slider—Red, Green, and Blue—and you'll probably find that only slight (or even no) adjustment gives you great results. Figure 13.13 shows the image converted using the Channel Mixer.

Figure 13.13 The image converted to black and white using the Channel Mixer

Selective Color Techniques

You might have seen black-and-white images in which only a portion of the image is in color. The technique to obtain selective color in Photoshop is actually very simple. I always get that "wow" factor when I show off my nature photos and mix in a few that are in black and white, with the exception of one portion of the image.

The technique is simple, and it's almost the same as the previous technique that converts color to B&W, except that you save a selection in which to retain some color.

The process to selectively retain color in a black-and-white converted image is as follows:

1. **Open a photo you want to convert to B&W while retaining a portion of the image with color.** As in the previous methods to convert to black and white, make sure you've made your tonal and color corrections and any edits that are necessary.
2. **Create a new layer you can use to make selections.** Create a new layer by pressing Shift+Ctrl+Alt+E (Shift+Command+Option+E on a Mac). Name this new layer Selections.
3. **Select a part of the image to remain in color.** Using the selection techniques covered previously, select an area of the image where you want color to remain.
4. **Duplicate the layer.** Right-click (Ctrl+click on a Mac) on the active layer and choose Duplicate Layer. Name the new layer Convert to B&W.
5. **Inverse the selection.** Because I want to keep the color in the selected leaves, I choose Select, Inverse (or press Shift+Ctrl+I on a PC or Shift+Command+I on a Mac), which inverses the selection so the rest of the image will get converted to B&W.
6. **Desaturate color.** Choose Image, Adjustments, Hue/Saturation or press Ctrl+U (Command+U on a Mac). Desaturate the reds, greens, and blues by clicking on the Edit Selection box, choosing a color, and then proceeding to move the Saturation slider for each color all the way to the left.
7. **Adjust contrast by using the Curves adjustment.** Figure 13.14 shows the original image, and then the image converted to black and white with selective color remaining.

Figure 13.14 Image converted to black and white with selective color remaining

TIP

If you shoot your images in raw format and use Camera Raw to convert your photos, you can skip some of the black-and-white conversion steps by doing your conversion in Camera Raw. In Camera Raw, all you have to do is make all of your tonal and color adjustments like you usually make them, and then move the Saturation slider to the left to desaturate the color in the image. When you're finished, just click the Open button to open your image in Photoshop.

Creating Scenic Panoramas

As a photographer who shoots landscapes often, I've learned to leverage the Photoshop Photomerge feature to assemble multiple images taken in succession for the purpose of creating panoramas. There is an art to shooting panoramas and then stitching them together in Photoshop; I've used the Photomerge feature often, with great results.

As in any workflow you initiate, there is a workflow for creating panoramics too. The panorama process starts when you're in the field shooting images, and then graduates to your digital darkroom from there. Before diving into how to stitch panoramas together in Photoshop, let's first review how to shoot panoramas with your digital camera.

For best results, take three or four photos of a scene, all with the same exposure and white-balance settings. All you need is a really cool panoramic scene to shoot and a couple of basic techniques. Here are some tips for shooting panoramic scenes:

- **Select a scene that's either wide or tall.** Remember, you don't have to shoot panoramic images with your digital camera level! You can stitch together panoramas when the images are vertical too. You can also shoot tall scenes from top to bottom to stitch together later.
- **Mount your digital camera to a sturdy tripod.** I always recommend shooting as many of your photos on a tripod as is humanly possible. A tripod helps you achieve the sharpest possible photos, especially when you're shooting in low-light conditions and your shutter speed is less than 1/125 of a second. Look through your viewfinder or LCD and pan the scene from left to right (or top to bottom) to make sure your camera is level. If you see that your panning is a little off, adjust your tripod head to level your camera as best as you can.

  Some tripod models include levels built into them; you can also purchase levels that attach directly onto your digital camera's hot shoe. If you don't have a level, consider purchasing one to attach to your digital camera.
- **Meter the main part of the scene.** I recommend using manual shutter-speed, aperture, and white-balance settings. Look at your LCD or viewfinder to see how your digital camera is metering the scene. Switch to manual mode, and then set your shutter speed and aperture to match your digital camera's first meter reading of the scene. *It is very important to ensure that the exposure is the same for every photo sequence you shoot*.

  Additionally, set your white balance manually to match the conditions you're shooting in, such as daylight, overcast, or shade.

- **Take a series of photos.** If you're shooting a horizontally oriented scene, start on the left and take the first shot. Pan your camera to the right until you've overlapped the previous shot by one-third of the frame. Take the second shot. Pan to the right again until you've overlapped the previous shot by one-third of the frame and take the photo. If your panorama requires a fourth frame, repeat the process, overlapping the previous frame by one-third.
- **Review your photos.** Using your digital camera's LCD, review your photos to make sure you achieved the results you intended. Check to make sure your images are sharp and properly metered, and of course *level*. If you need to, take another series of panoramic shots using different zoom settings on your lens. Keep shooting different aspects of the scene to make sure that you captured the panoramic frames you know will make a great continuous scene.

With a number of images taken in sequence that you can stitch together into a panorama, it's time to use Bridge and Photomerge. Photomerge is a Photoshop utility that's accessible from both Bridge and the Photoshop File, Automate menu. I find it easiest to use Bridge to choose my images first. Follow these steps to choose images to stitch together in Photomerge:

1. **Open Bridge and select the folder to choose your images from.** Browse the thumbnails for images you've taken in succession.
2. **Process the images using Camera Raw (for raw images only).** Assuming that the images you want for your panorama are still in raw format, you need to process each of the three or four images you'll be using. To ensure that all of the images you'll be using for your panorama share the same Camera Raw adjustments, first process the initial image in the sequence in Camera Raw. Make any necessary adjustments.

   Now copy the raw settings. To copy raw settings, right-click (Ctrl+click on a Mac) on the image thumbnail in Bridge and choose Copy Camera Raw Settings. You'll want to apply the settings made to the first image to the remaining two or three images in your sequence. This will ensure that adjustments are the same for each image in your panorama, which is important because you want all the images to have the same color and tone throughout.

   You can then apply raw settings to the remaining images by selecting the remaining images in your sequence into which you want to paste the Camera Raw settings. Click their thumbnails while holding down the Alt key (the Option key on a Mac), and then right-click (Ctrl+click on a Mac) and choose Paste Camera Raw Settings from the flyout menu.

3. **Select images in Bridge that you want to Photomerge.** Select each photo intended for your panorama in Bridge by holding the Alt key (the Option key on the Mac) while clicking each image.
4. **Start Photomerge.** Choose Tools, Photoshop, Photomerge. Photomerge will attempt to assemble the images as one. For some panoramas, Photomerge can't quite figure out the entire panorama on its own, so you'll have to drag the images into the Photomerge window yourself (and line them up in the proper position there) to complete your panorama. Figure 13.15 shows the Photomerge window with the panoramic image stitched together.

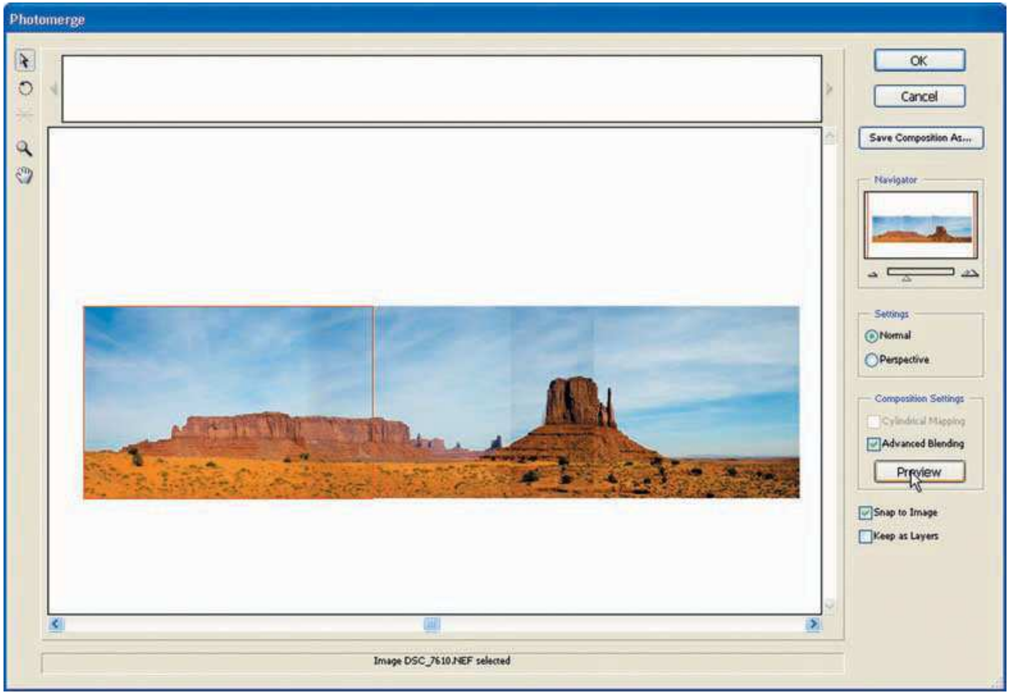


Figure 13.15 Photomerge stitches together your panoramic image

5. **Click the Advanced Blending check box.** After checking the Advanced Blending check box, click the Preview button. Advanced blending gives you a better preview of how well Photomerge combined your images.

   For more control over how your images are overlapped with one another, you might have to use the Select Image Tool to move individual images around so they overlap properly. You can use the Zoom tool to magnify the different overlapping areas of your image so you can check the overlap for each part of the panorama.

6. **Click OK to load the panorama into Photoshop.**

7. **Crop the image.** After you get the image into Photoshop, crop the image to ensure that its borders don't contain any white space.

8. **Complete final color adjustments, tonal corrections, and edits.** As with any image, go through your overall corrections and editing workflows to finish the image and get it ready for output. Start by using the Levels, Curves, and Hue/Saturation adjustment levels to fine-tune color and tone. Make any necessary edits, such as dodging and burning (covered earlier in this book).

   Additionally, there isn't any rule that says you can't do panoramas in black and white! Create a new layer and perform a black-and-white conversion (using the techniques discussed earlier in this chapter) to create another interpretation of your panorama.

Summary

I consider this to be the most fun chapter in the book. Expanding your creativity with Photoshop filters, black-and-white conversions, and panoramas will allow you to expand your portfolio of nature images. Consider incorporating some of the techniques reviewed in this chapter into your everyday image-editing workflow. As a rule, I often create a new layer for many color images, just to convert those images to black and white. Tastes change over time, and one day you might want a black-and-white version of a photo. This way, you'll always have one stored in your image library.

I don't recommend going hog-wild with adding effects to photos, but having these techniques in your own bag of tricks is a great way to expand your nature photography horizons and have a little bit of fun while you're doing it. If you have time, revisit your old images and see whether you can rescue some duds by applying some creative filters or techniques to them. You'll be surprised by how many more usable images you actually have in your nature image library.

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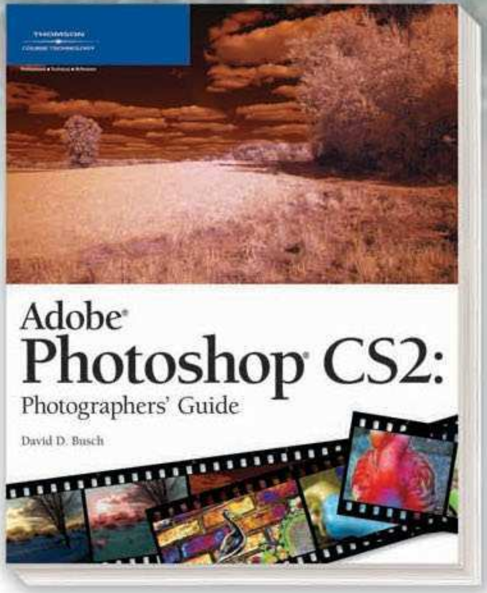

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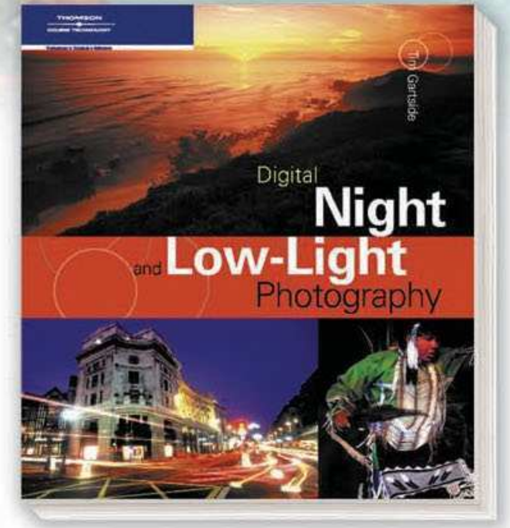

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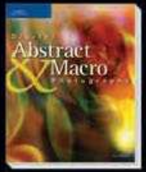

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